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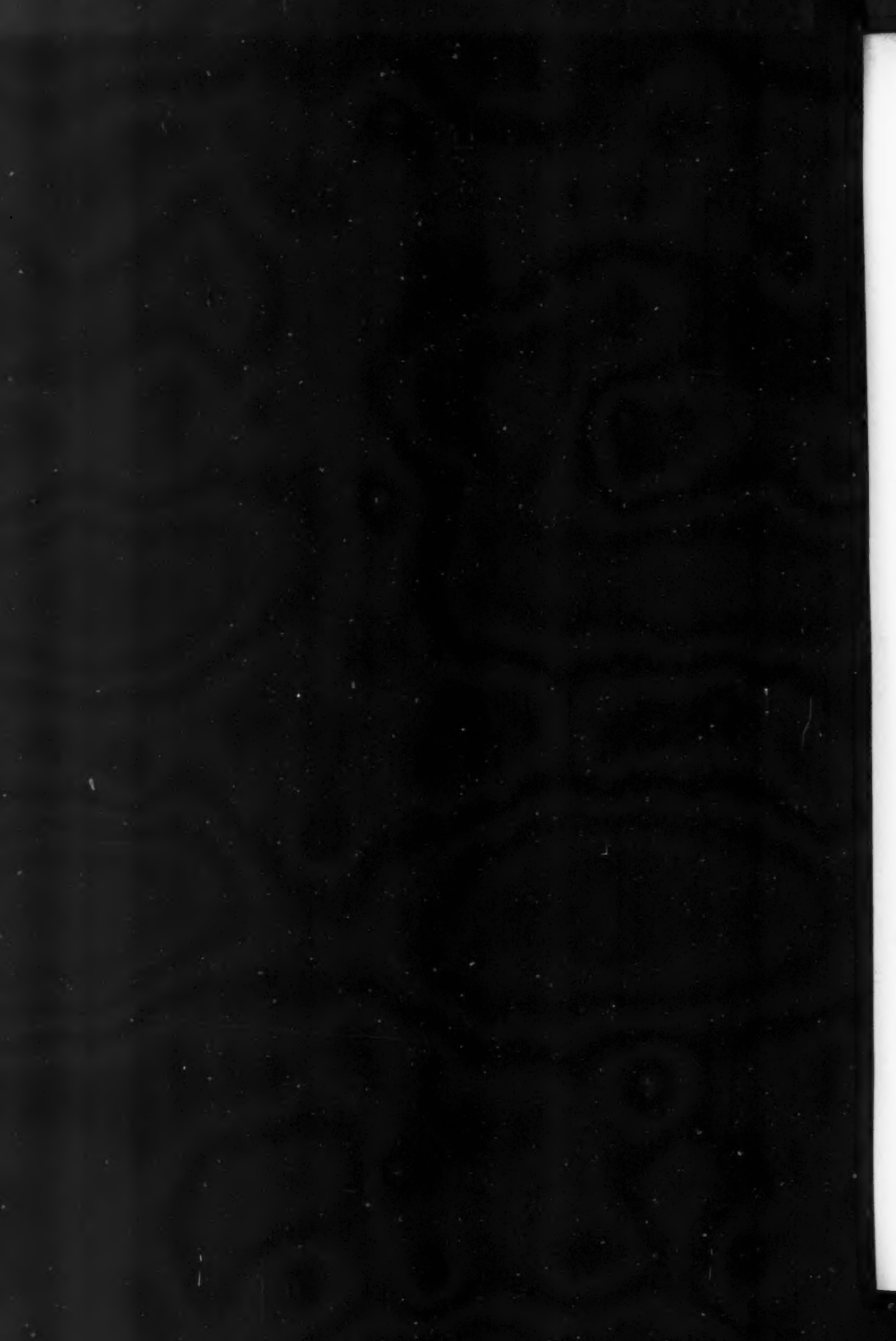
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ROSE AYLMER'S GRAVE.

Rose Aylmer died in Calcutta on March 2nd, 1890, and is buried in the Old South Park Street Cemetery.

An English grave 'neath Indian skies,
Marked by a sullen stone ;
And this is where Rose Aylmer lies,
Far, flowerless, and alone.
Rose Aylmer was a poet's love,
Sweet, beautiful, and young ;
Her elegy, in melody,
The poet-lover sung.

About her grave no flowers grow,
No pleasant boughs are stirred ;
No gentle sun, no quiet snow,
No English bee or bird.
The suns of springtime scorch the stone,
In summer, storm and rave
The winds that herald the cyclone,
The rains, that lash the grave.

Rose Aylmer's sister-flowers should spring
In whitest bloom above ;
The roses Landor could not bring,
Far distant from his love.
And now, a snake lives near her bed,
The crows perch on the rail,
A kite sweeps past, and overhead
The unclean vultures sail.

*"Ah what avails the sceptred race,
Ah what the form divine !
What every virtue, every grace !
Rose Aylmer, all were thine.
Rose Aylmer, whom these wakeful eyes
May weep, but never see,
A night of memories and of sighs
I consecrate to thee."*

Ah, why regret the gloomy hearse,
The land of banishment ;
This is her grave ; but Landor's verse
Rose Aylmer's monument.
Rose Aylmer, on thy namestone lies
Love's rose immortally,
The Rose of memories and of sighs,
Once consecrate to thee.
Temple Bar. A. M. F.

THE DREAMER.

He loves to watch the waves at play
Leap up the rocks with ceaseless roar,
And see their snowy, showering spray
Dissolve in pearls along the shore.

The western sky is dear to him
When rosy day with twilight blends,
And on the ocean's purple rim
The sun, a globe of flame, descends.

The white clouds sailing in the blue,
The white stars peering through the
night,
He loves, because they bring to view
The fringes of the infinite.

He hears the music of the skies,
The thunder's bass, the song of birds,
And vainly tries to crystallize
His soul's rich harmonies into words.

And wandering in the Autumn woods,
Far from the sight of human face,
His fancy fills the solitudes
With shapes of beauty and of grace.

What boots his idle dreams to those
Who with unconquerable will
Toil from the dawn till daylight's close
To keep the world from standing still ?

He smiles, and says his dreaming tends
To show the beauty of design ;
To shape men's lives to nobler ends,
And draw them nearer the divine.
Chambers' Journal. J. SCOTT.

WHITE MAGIC.

AGAINST the world I close my heart,
And half in pride and half in fear,
I said to Love and Lust : Depart ;
None enters here.

A gipsy witch has glided in,
She takes her seat beside my fire ;
Her eyes are innocent of sin,
Mine of desire.

She holds me with an unknown spell,
She folds me in her heart's embrace ;
If this be love I cannot tell :
I watch her face.

Her sombre eyes are happier
Than any joy that ere had voice ;
Since I am happiness to her,
I too rejoice.

And I have closed the door again,
Against the world I close my heart ;
I hold her with my spell ; in vain
Would she depart.

I hold her with a surer spell,
Beyond her magic, and above ;
If hers be love, I cannot tell,
But mine is love.

ARTHUR SYMONS.

From The Quarterly Review.

LATTER-DAY PAGANS.¹

EURIPIDES has left no more touching story than "Hippolytus the Crown-bearing,"—a play in which, as by some inspiration from another world, the poet canonizes purity, adorns self-denial with a martyr's death, and, while his choir of singing women chant the praises of Aphrodite, opens to our view a holier faith. If Aphrodite seems victorious, yet she holds but the second place; it is her rival, the woodland Artemis, chaste and fair, who rises in so bright an effulgence above these colored mists, stainless as marble from Pentelicus, severe yet by no means inhuman, and full of compassion for the dying hero. Save him she cannot; lift him to the sphere of the immortals she can and will. Unlike her dreadful namesake of the Chersonese, Artemis here shadows forth the better Paganism which, scorning Ionian festivals, fled to solitude, in the hope of communion with what was divine. Her votaries laid upon themselves a rule and a yoke; their spirit of renunciation made them not unworthy to be disciples, by and by, of a name which had the power not only to cleanse, but to consecrate. Hippolytus foretells the philosophic Marcus,—a Pagan saint, and a king after Plato's own heart. This way, if it continues to ascend, will take no small multitude along with it, to the threshold on which they may kneel in adoration, and see the Christian mysteries unveiled.

But the lower Paganism looks up to Venus Victrix, whom Lucretius celebrates:—

¹ 1. John Addington Symonds: a Biography compiled from his Papers and Correspondence. By Horatio F. Brown. London, 1895.

2. The Renaissance in Italy. By J. A. Symonds. London, 1875-86.

3. Essays, Speculative and Suggestive. By the Same. London, 1890.

4. Animi Figura. By the Same. London, 1882. And other Works.

5. The Renaissance, Studies in Art and Poetry. By Walter Pater, M.A., Fellow of Brasenose College, Oxford. Seventh Thousand. London, 1893.

6. Marius the Epicurean. By the Same. Sixth Thousand. London, 1892.

7. Greek Studies. By the Same. London, 1895. And other Works.

Te, Dea, te fugiunt ventel; te nubila cœli,
Adventumque tuum; tibi suavis dædala
tellus

Submittit flores: tibi rident æquora ponti,
Placatumque nitet, diffuso lumine, cœ-
lum.

She is queen of Epicureans, Cyrenaics, dilettanti,—of all who choose to be "exquisite humanists" rather than humane, who prefer sensations to principles, caprice to law, and intoxication to duty. The pose which these men assume is more affected than Byron's, and their pleasures are, by definition, sad ones. These serious triflers marvel exceedingly that so many can waste the time which they might have spent in pursuing savors, scents, and rhythms, upon the "flaccid interests" of law, business, politics, or philanthropy. When a sharp touch sums up their conversation as "art and self-indulgence," they gently applaud. Another stroke might annihilate the art, leaving only the indulgence; and this, perhaps, would be a return to that "unity with one's self" which, we are told, is "the eternal problem of culture,"—a problem solved during one brief moment in Hellas when morals held "the clue of unerring instinct," and the worship of "beautiful aspects" was religion.

Two biographies lately published—the one real, the other imaginary yet in some sense no fiction—enable us to survey in detail that æsthetic movement which has been with us these thirty years, and the principles of which run up into Paganism, Cyrenaic, or Stoic, but avowedly pre-Christian. Nor shall we be doing it an injustice whether we assume that the late Mr. Symonds entered deeply into the meaning of a philosophy which, as time went on, he exchanged for another, or that Marius, the Epicurean of Pater's shadowy romance, had many qualities in common with his creator. To follow their windings will not, perhaps, be easy; yet the changes through which they pass, and their final verdict on a movement the effects of which are visible in the fine arts, in literature, and in social intercourse, will have for us

something in the nature of an experiment carried out on our behalf.

The experiment, to one of those concerned, was tragic enough. In his own pages, where the lights are as intense as the shadows are gloomy, Symonds writes himself down a failure. He despairs from the beginning; and after many years, although friends have come to him, and fame, and a wide spiritual influence, he despairs still. He moves round the circle from Leopardi to Goethe, and thence to Walt Whitman, whose optimism would have struck Leibnitz dumb. What is the last word? Still Leopardi, "E naufragar m' è dolce in questo mare." But you are an optimist, his correspondent cries. "Yes," he answers, "an optimist prepared to return to Nirvana, thankful that no proof is forthcoming to demonstrate immortality. This hope is sweet in my bosom." He can lie on the knees of Doom, look down the years past and see that he has been what he was to be, "a literary viveur," and at length disdain the Pagan myths which held his fancy or inspired his pen, as "a spectral corps de ballet on the empty stage of Nature." He, if any one, has dedicated his life to learning and its æsthetic uses; but now, with an energy almost equal to Swift's, he declares that genius, weighed in the scale against character, is light; culture not to be compared with action,—that "passion, nerve and sinew, eating and drinking, even money-getting, the coarsest forms of activity," come before it. "Life, not literature," he exclaims. It is clear that when Paganism takes a certain large sweep, art, which was once its finest flower, may wither on its stem. But life, unless it falls to drift and dross, will demand a standard. We look for it eagerly in this immense correspondence, in the essays, poems, histories, flung out to us by the unwearied invalid. There is none. Talk we find of human service; abstract worship of Law; hymns recommending the "cosmic enthusiasm." But a rule of conduct, or grounds of hope—these Symonds cannot give; and he makes

known his poverty with a frankness which cuts to the heart, as we read him.

So little from so much? Unlike many children of genius, he was the heir of a noble estate in intellect, with circumstances of gentle nurture, domestic happiness, friends of name, and the doors into public life open. Six generations of Puritans—whose letters he should one day burn—had bequeathed to him a tradition of strenuous piety, transfigured or filed down in his father—a successful and art-loving physician, Liberal and Broad Church—to moralities and modern progress. In their fine old pedigree might be reckoned a Knight Templar, a Crusading captain, a founder of the Garter, colonists to Ireland and New England, a regicide, Cavaliers and non-juring clergymen, all coming down from Adam FitzSimon, who held lands in Hertford, Essex, and Norfolk under Bishop Odo. The Roundheads, however, prevailed in shaping Symonds's childhood, despite his free-thinking parent. He is full of indignation at the hard noviciate that he endured in their Bethesdas and blind asylums, thanks to his grandmother Sykes, the Plymouth sister, and her "motley crew of preachers and missionaries, trades-people and cripples." That lady held all things pleasant to be of the Evil One. Her ailing grandson was haunted by a morbid sense of sin; and when the cholera broke out, prayed feverishly that he might not catch it. Religious to this extent he was,—no more. Of the Gospel, in these pools where pietism lay stagnant, he heard nothing. Mrs. Sykes—her only human trait seems to have been a love of flowers—took immense delight in "the minatory chapters of the Prophets," and the Apocalypse. We cannot be surprised if a child brought up in this atmosphere suffered terrors unimaginable, or was persuaded that "the devil lived near the doormat" in a dark corner by his father's bedroom. But never any one saw into the solitary mind, which through the brooding fancy lived a life of its own.

For if his surroundings were dingy in that town of Bristol, nearly fifty years ago, yet the house and garden of Clifton Hill which his family occupied, and which he looked upon always as his true home, had a special air and grace of breeding. He learned to know pictures and poems, revelled in music and in the gloom of St. Mary Redcliffe, was inspired by Scott's "Marmion" to cry out, "I too will be an author," filled his imagination with Shakespeare's "Venus and Adonis," wept with artistic delight over the vision of the god Hermes, disguised like a shepherd-boy in Homer's Iliad, went on weaving to himself day-dreams of Apollo serving among the herds of Admetus; he came to distinguish and to love the fairest colors, the tones of the clouds, the beauty of lightning; and in idyllic drives with his father, in pilgrimages to his mother's grave, — she died young, leaving a memory of grace and brilliant intellect, — in readings miscellaneous, from studies of anatomy to "innocuous Greek and Latin," this strange boy, companionless, not athletic, and, as he says, quite unmanageable, was training himself to be the man we see before us. Limits his powers had, as strongly marked as the vivid perception which his eyes always brought him, and his facility in writing verse. He could not learn the multiplication table or the subjunctive mood; he fell into trance until he was twenty-eight, lived more in sleep than during the daytime, was sensitive about his person, ambitious but "permanently discouraged," and, though seeming candid, impenetrable.

Pietism and art were struggling, thus, over the boy's soul, — Religion raven-winged, grim, and gaunt, while culture was Apollo ever fair and young, shining in golden armor. His eyes alone served him for windows of the soul; what hope, then, of victory on the side of that dismal phantom which called itself divine, yet never had the glamour of beauty upon it? Though not creative, Symonds had been from the first as if bred in the schools of Athens or Venice. Our

grey skies revealed to him the miracles of cloud-building, which, long after, when he had made Alpine solitudes his retreat, still seemed to possess all the elements of the sublime. Pictures in his father's house told him of that sunny marble world, perfect and flawless, which in the great galleries of the South, in the Louvre, in our own Museum, shines on the sordid background of modern life. Then the reserved, sentimental boy finds himself in a public school. His father, who had not a dream that John was either emotional or passionate, sends him to Harrow, and he is miserable. He stammers and faints, yet — the spirit which was in him holding on bravely — gains an influence over his comrades, makes life-long friendships, learns Theocritus and Shelley by heart, and sits up during a summer night to finish the "Phædrus" and the "Symposium," which give him back, in all the hues of a style beyond imitation, the enthusiasm whereon his home-life had been nourished. That was the aspect of Plato which decided his future. It saved him from a "torpid cynicism," only too congenial with the less wholesome influences of a place where he was manifestly out of his element.

Oxford succeeded, and to Symonds it proved the large liberal abode of freedom and ideas, — "an ampler ether, a diviner air," — with spirits so different as Jowett and Conington to furnish him themes of meditation. His career had its triumphs. He won the Newdigate, took a first class, was elected fellow of Magdalen. But his life-long travels in search of health over the Continent began. For, already, Jowett was remarking that he had "no iron in his composition," while another described him as "worked out in 'premature culture.'" A severe illness followed upon this indigestion of the mind. The cloud which now descended was never wholly to lift. Languid days, long agonies of doubt, suicidal fancies, prepare us for the announcement that he, who never had been a Christian by training or temper, had lost all belief in the supernatural.

He wanted guidance, but none was vouchsafed. The Oxford of thirty-five years ago, he says, made men rhetoricians and sophists, who would come out brilliantly in the *Saturday Review*, and, if they fell under Jowett's influence, were sceptics. But it gave them no principles beyond a vague sense of duty; they were taught, instead of philosophy, mere literature. There was no process by which a man would be compelled to think, — neither robust mental training nor sound gymnastic. Hence the crowd of amateurs, seemingly omniscient but in fact blind, among whom this candid critic of himself may be found by his own admission. Endowed with certain "proclivities," but no "commanding bias," he wandered aimlessly from one pursuit to another. It is the year 1862; but in a rich and amusing picture which he draws of his undergraduate flutterings, we see the dawn of that movement wherein Mediævalism, the Renaissance, Mr. Ruskin, Japanese ware, old blue china, and the French symbolists, were to play their several parts.

Conington, indeed, directed his pupil upon the path of literature by "principles of common sense and manly prosaic taste." The Hegelian Thomas H. Green, afterwards his near kinsman by marriage, could not bestow on him a sense for political or abstract interests, but strengthened his character by exhibiting a noble personality in their long and affectionate intercourse. However, on the whole, Symonds remained what he had been at Clifton, a self-absorbed dilettante. His apprenticeship to the golden alchemies of the "Opium-eater," whose style was a standing-dish at college breakfast-parties, and his dabbling in Mr. Ruskin's "paint-box of colors," did not seem likely to atone for the loss, not merely of creeds and dogmas about which he had never vexed himself, but of the belief in divine realities now altogether gone. Henceforth, the world invisible was to be an enigma or a torment as he stumbled on, bleeding and solitary, along the Via Mala which he called existence. To such issues was he im-

pelled by fatal, though well-meant, influences, now in words of miraculous efficacy, anon by the mere burden of paralyzing silence, and, too often, with interjections which their victim charmingly describes as at once "crushing and inconsequent." The luminous haze that spreads over so many pages of our English Plato proved to Symonds an enfolding Alpine mist, with here and there a silver-circled glacier piercing through, but the way uncertain, the guide as perplexed as his followers, and crevasses opening into unknown depths.

Down such a crevasse Symonds was hurled, almost at the moment when his path seemed brightening. Elected fellow of Magdalen, suddenly a charge was brought against him, says Mr. H. F. Brown, by a "quondam friend," resting upon "garbled letters," which in its consequences was nearly fatal. "Deeply wounded in heart, brain, and nerves," — to borrow Symonds's account of the matter, — he went abroad, and for the next three years, until 1865, his wanderings, laments, and physical distress make a sad story. With eyes useless and brain enfeebled, unequal to serious reading, no man had more need of religion. His emotions called aloud for faith, — "it is the oxygen of life," he said; but his intellect rose against every form of Theism. "The old realities have become shadows," he exclaimed, "but the shadows torment me." His dreams were avenging Furies, even in the calmer Oxford season; now they showed him to himself in frightful and disgusting aspects. Music wrought like an anodyne; but it was neither food nor light. He married, and always found in the home life a refuge from trouble. Yet says he mournfully, "*Je suis venu trop tard dans un monde trop vieux.*" The artist in him feels aged, the man a wreck. And he is five-and-twenty.

By instinct he had begun to write upon the Elizabethan dramatists. But he consulted the oracle in Balliol, and the answer was significant of Professor Jowett's curious infelicity, when genius did not come to his aid. If the master

could have gone through those brilliant pages of correspondence which we now admire,—abounding in the perception of color and form, in exact details of things experienced, and in thought no less solemn than impassioned,—he would have pointed the way to literature, but not to the drudgery of translation. Symonds had eloquence; he painted landscape in words as truly as the great writer whom he has sometimes copied, though not servilely; and his prose-sonatas are splendid in their language and rhythm, subtle in exposition, and occasionally very pathetic. Who can doubt that the proper task of Symonds was criticism?—but, as Matthew Arnold would say, criticism touched with emotion. Professor Jowett did not think so. He had a way of giving his friends tasks to perform, “undoubtedly useful,” but for which they were not in the least fitted. And now he talked of Hallam,—that dry, scholarly man who displayed neither rhetoric nor emotion when he was writing,—nay, it appeared that a certain Zeller, a German (and Symonds detested Germans), had published a library of books on the Greek philosophers, to dig and quarry in whose mine Jowett enticed his reluctant friend. For years the translation haunted him; a “muddy stream,” not even, like Bayle’s dictionary, “a mighty tide of ditch-water.” It would not flow; and Symonds, at last, gave his unfinished manuscript to another, who has no doubt, by this time, printed his Zeller in English. To the original translator, it was a task which fatigued eyes and brain, threw him upon the wrong track, and brought neither reward nor gratification.

His “fatal facility” had been censured at Harrow. It was now thoroughly curbed by Zeller, and, health not returning, the uncongenial task left his mind vacant, his spirits depressed. He is one of the world’s invalids, who can but exclaim, “Imus, imus præcipites.” Not Handel’s music, nor the garden-landscapes of Monaco, bring him relief. He is “a saltless soul,” doomed to “rot for thirty years on the

dunghill,” borne down by a lethargy in which will and power of thought are exhausted. The high Alps revive him again, and he writes: “I have a deal of faith, not reduced to a creed—*Quis Deus incertum, est Deus.*” But is there a Father in heaven who will listen when he prays, and answer him? Alas, no; the hidden Deity has, perchance, neither ear nor voice. What is left? he asks. “To live bravely in the Whole, the Good, the Beautiful”? So the wisest of modern men. But Symonds, taking the words to himself, adds a striking comment, “We cannot be Greeks now;” and “hasheesh,” not the vital oxygen of faith, must satisfy us. “We can dull the present by living the past again,” he says to a philosophic friend, Mr. Henry Sidgwick, with whom he corresponded largely, “in reveries or learned studies, by illusions of the fancy and a life of self-indulgent dreaming . . . Take down the perfumed scrolls . . . Behold, there is the Athens of Plato in your narcotic visions: Buddha and his anchorites appear; the raptures of St. Francis, and the fire-oblations of St. Dominic; the phantasms of mythologies, the birth-throes of religions, the neurotism of chivalry . . . all pass before you in your Maya-world of hash-eesh, which is criticism.” May we not subjoin that it is decadence?

Yet these airy phantoms have no warmth in them; and he is plunged into “the glacial region of the soul,”—*Abyssus abyssum invocat*. If there could be reconciliation of his many doubts, Beethoven and the C Minor Symphony, music, rather than metaphysics, might suggest “the height, the space, the gloom, the glory,” in which “we know,” but cannot frame a creed. Still roaming up and down the world, studying Norman cathedrals at Coutances and scaling the heights of Mont Saint-Michel, he waits for a revelation or a crisis. The maladies of the spirit seize him while wintering in Cannes; there, as Teufelsdröck would say, he wrestles with the everlasting no, and is almost overthrown. “Hours too black for human language

pass by ;" the soul comes forth, living but scarred ; and now he will shape his "rule of conduct" in one single axiom. Out of the "devil's cauldron" — his own word — he has emerged ; and it is a day of conversion on which he moves into "Stoical acceptance of his place in the world, combined with Epicurean indulgence." A combination, indeed ! "These two motives," he observes, "restored me to comparative health, gave me religion, and enabled me, in spite of broken nerves and diseased lungs, to do what I have done in literature."

Not once, but intermittently, suicide came within his view. "It offers no solution," he said, and waved the tempter from him. And the solution which he did accept? Was it "some clear faith in things that are pure and eternal"? Or "a definite conception of Deity"? Not so. In the vacuum of abstractions — thus his biographer sums up — he could no longer breathe. It was impossible to find the Absolute. He turned then from thoughts to things, from ideals to sensations, like a second Doctor Faustus ; and while his state of "entire negation" became, as it were, crystallized by so deliberate a choice, in action he was henceforth the dilettante, curious and impassioned, who looks not for tomorrow. All moods of existence, if they be pleasurable, are justified to him. When they give pain, resignation is the wisest course. By such adjustments, adroit and ever-renewed, did Goethe, in the spirit of a stage-director, contrive to enact the drama of life, not believing in "things pure and eternal," yet, on the whole, a successful artist, who with his last breath might whisper, "*Vos valete et plaudite.*"

Hippolytus, then, offers garlands to Aphrodite, and, like a child playing on the edge of the abyss, will disport himself until he falls in. The Stoic travels towards his grave singing ; the Epicurean borrows King Solomon's seal on which is inscribed "*Omnia Vanitas,*" and in virtue thereof bids genies and demons serve him up a banquet of

pleasure. To "live in the whole" is to enjoy the moment. We cannot forbear observing on the coincidence, as undesigned as it is remarkable, between these passages in a real biography, and the moods, the language, and the reasoning ascribed in an imaginary one to Marius the Epicurean during his time of servitude to Aristippus. Certainly Pater was not drawing from Symonds ; but with the sagacity of principle, he traced those ideal curves which, given a temperament thus compounded, the man was likely to follow.

Now, had he taken hold of a "clear faith," all would have gone well with him ; and Symonds, who long had known the charm of Augustine's intimate and naïve self-portraiture, might have found — in the Seventh Book of the "Confessions," we will say — the truth which he was seeking, a heaven of cloudless light above his mind. This, to speak in a later tongue, is "the Divine Idea at the bottom of appearances." But our unhappy man is not Augustine. "I feel paralyzed," he writes again, "by the confusion round me, science and religion clashing, no creeds emergent, social conditions shifting like quicksands, the phantasmagorias of old literatures rising up to mock our modern style." In an age no less chaotic, the great African saint could learn where the track led up to the Mount of Vision. But he, though for a time bewildered, had come to live in communion with the Highest. Augustine was alone with the Alone ; Symonds was by himself.

But he will go to the grave singing. Henceforward, the diary loses its introspective tone. It narrates the travels of an idle, sufficiently well-to-do Englishman through Corsica, Tuscany, Venetia, and back to the Alps. It is full of enjoyment, observation, historical acquisition. It tells of Italian studies, in Tasso, the "Orlando," and Tassoni. The "persuaders of death" remain, it is true, the one sect irrefutable ; and in the midst of golden verse-reading, we hear this minor chord, "I am incapable of living for any purpose, or of raising my soul to

the altitude of a delusion." His friend argues that wickedness goes down upon an inclined plane. "Maybe," replies Symonds, "but what is to arrest one, and why should I seek to be arrested?" He wishes that he could embrace Positivism; but he sees too clearly that Comte "makes his universe revolve round the men on this planet," and a scheme so pre-Copernican appears to him inane. At Clifton he lectures on the Greek poets, with inward disgust, and yet listeners say that "his intellect sets ours on fire." In conversation he was at his best; the "intense emotional susceptibility of a limited and rather superficial kind," for which he gave himself credit, was making of him an "Opalstein," as R. L. Stevenson long afterwards called him. His brain, impenetrable to abstract ideas, left room for things visible, with their atmosphere of feeling, and provoked the "splendid audacities," the *Paradoxa Agnosticorum*, let us term them, which gave to his conduct of an argument the pleasure of the chase. With his "sensuous, artistic temperament" was combined a vein of rare sweetness. He was winning friends wherever he settled, and, though not expectant of success, held on, tenacious of what he undertook, but so much weaned from literature as to despise it ere he had chosen it for his profession. "I was disciplined by failure into democracy,"—this sentence and the like proclaim with incisive sharpness a new creed. "I will have nothing," says Whitman, prefixing an oath, "of which all cannot have their counterpart on the same terms." The words are echoed by his disciple. And in a vein thus detached from the task he was entering upon, Symonds began his studies of the most select and exclusive movement which Christian Europe has witnessed,—we mean the Renaissance.

First, however, he touched at Palermo and Girgenti, and paid a religious visit to Athens. Of the Greek spirit he says, with that remembrance glowing in him, "it is pure light, all human and beautiful." The serenity, the

Doric grace and order, steeped him for a little while in their calm. Then, returning to England, he met with an accident, was ill and broken; travelled again,—Malta, Tunis, Rome, Perugia, Florence, such are the musical names that we light upon continually in this pilgrimage,—and Symonds makes us share in his conviction of the debt we owe for beauty and refreshment of soul to Italy, a lesson he was never weary of enforcing. The worship of German ideas, except in Handel and Beethoven, he deemed nothing less than a sort of fetishism, which cannot discriminate between Hellenic loveliness and idols shapeless and primeval. Always he lived by sight and not by faith; yet the artist may well decline to bow down in worship where philosophy has nought save empty abstractions, to console him for his "fantasies in marble" now smitten to dust.

He was thirty-five when he published the first volume of "The Renaissance in Italy;" and he lived to finish that large undertaking, as well as to write several books of poems and essays, to translate the sonnets of Michael Angelo, the memoirs of Cellini and Gozzi, and to compose a life of Buonarroti. His activity, great and incessant, though illness struck him down, ranged over the provinces of literature with an ever-ripening judgment and a fastidious choice until he could say, in an instructive sentence, "We love the sternest things in life best." For the duties of the historian, he was on more than one account singularly disqualified. Names, dates, events which he had not seen or felt, might be learned with facility, but vanished from his mind as if writ in water. "Vague, ill digested, inaccurate, rich in possibilities, poor in solid stuff,"—this description of faculties which were to be employed on a task where Gibbon might have failed, does not inspire us with confidence. Nor will metaphor and imagery, whereby Symonds hoped, if not to subdue, yet to circumvent philosophical ideas, furnish that insight, lacking which a student of the Renaissance period is sure to put bitter

for sweet and sweet for bitter, to dream that the "worship of the body" is a "new birth unto freedom," and to degrade science into the apologist of a sensual and decorated unbelief. Seeing he will not see, and hearing he will not understand.

These are faults of a more serious kind than the purple patches and rhetorical tone which their author has marked in his volumes. He moves everywhere on the surface, content if he is dealing with painters, poets, humanists, in a fashion almost operative, and on a system so conventional that his characters fall in, line for line, with the legends and caricatures which a little judicious criticism puts out of court. Large and complex themes—Catholicism, the Reformation, the revival of learning—handled a thousand times by partisans, striking their roots deep, and abounding in tyrannous individualities, that differ as much as Julius II. and St. Charles Borromeo, as Erasmus and Poliziano, Luther and Savonarola, would seem to suggest a weighing and sifting of evidence, and readiness to hear both sides. But Symonds will not always be at the pains to understand the language he is quoting; and so faint is the grasp which he has upon his subject, that when a master more judicial and enquiring comes forward,—when Bishop Creighton sets the Roman events in a just perspective,—he has hardly a word to say beyond the suggestion that somewhere, *quand même*, an adequate cause must be found for the Reformation. Unless the whole drift of his volumes be mistaken, that cause he had himself set forth in words of vehement eloquence. But one who is incapable of mastering principles, to whom the philosophies of the mediæval period are a myth, scholastic Latin an enigma, the enthusiasm of religious nations a far-off sound, and the *vita contemplativa* of saints simply unintelligible, may, indeed, pass sentence on the details of painting, or guide us through the galleries of antiques, he will never be the Thucydides of an age when human thought was more active even than

earthly passions, when interest, political or private, felt the imperious sway of theology, and when a friar at Florence or at Wittenberg proved himself a match for dynasties as cultivated as the Medici, and emperors reigning in both hemispheres like Charles the Fifth.

One sample of his uncertain dealing may suffice. In the history, Michael Angelo, greatest of Christian and Italian artists, is exalted as the "Prophet of the Renaissance." And what is meant by the Renaissance? It is "the spirit of mankind recovering consciousness, recognizing the beauty of the body through art, liberating the reason in science and the conscience in religion, restoring culture to the intelligence, and establishing the principle of political freedom." But, to attain this noble consummation, the Renaissance breaks with Church and Christianity. It is Humanist before all things, and Humanist means Pagan. Hear Symonds again: "The essence of Humanism consisted," he declares, "in a new and vital perception of the dignity of man as a rational being, apart from theological determinations, and in the further perception that classical literature alone displayed human nature in the plenitude of moral and intellectual freedom." These are brave words. The question is, will they explain Michael Angelo? Let us call our other witness, Pater, himself enamoured of freedom, a Humanist to the core, but with his eyes open.

Pater writes concerning the mighty sculptor, the poet of deep and melancholy thoughts, the artist who has rivalled with his brush Isaiah and Ezekiel in power of vision, that he was, not the prophet who began a period, but "the last of the Florentines, of those on whom the peculiar sentiment of the Florence of Dante and Giotto descended." Nay more, that "up to him the tradition of sentiment is unbroken;" that, although "his professed disciples did not share this temper," he is so far mediæval as to endow sculpture with a certain "inwardness" which the Greeks never

possessed ; that from the Middle Ages he derived his "central conception" in painting, on the vaults of the Sistine Chapel, the "Creation of Adam," and that he did but give to their floating dream or ideal the perfect touch. Among new Pagans and new Catholics, observes Pater, he seems a ghost, or *revenant*, from times which to them had grown fabulous, lingering beyond his day in a world not his own.

Hard it surely is to reconcile this disciple of the ascetic Dante, of Nicola Pisano and Savonarola, with the sensualists and profligates who sold themselves to unsavory imitation of classics they did not comprehend. But we may spare ourselves the trouble. Symonds, not for the first time, has sung his palinode. We turn to "Essays Speculative and Suggestive," and we find the warning which he might have addressed to himself, that between "moral enfeeblement and æsthetic vigor" — notes whereby in so many histories, including his own, the Renaissance has been defined — "there existed no causal link." On the contrary. "The best work of that brilliant period was accomplished during years which still retained the glow of mediæval faith and the verve of republican enthusiasm." And he continues, "What survived of force and goodness in the nation enabled painting to flourish between Giotto and Buonarroti." So then, we ought not to signalize the deliverance of the human spirit as following upon a new movement in the fifteenth century ; there is no such break between the faith of Dante and the "best work" which was done by Michael Angelo, Raffaele, Leonardo, as would justify us in marking off by a blank page the New Testament of art from the Old. Boccaccio infects the poetry and romantic fiction of the Medicean age with his own license ; therefore, observes Symonds, it stands condemned to "artistic mediocrity." The "myriad polished lines of Bembo, Molza, Sannazzaro," the narrative poems which abound in Humanist circles, we may "abandon without a sigh," there is no life in them.

Seneca has rightly judged that "effeminate animos amœnitas nimia." And the symbolism of Bartolozzi — to which the Renaissance tended from the beginning — is "insincerity and second childhood," the aim of which was "to clothe a faint and saccharine emotion with graceful form." Symonds, forgetting his Lydian moods, informs us that he is of one mind with Aristotle, who has laid it down that "morals are architectonic," goodness queen over truth and beauty. We have, in short, sung our palinode.

So vaporous a conception of principles will furnish no supreme historian. With all his reading, Symonds could not achieve a classic page ; the poems which he has left — although not, as in the severe judgment of Conington, to be set down as without form and void — are but echoes from Shelley, Swinburne, or Leopardi — cries of distress in another man's dialect, plagiarisms the pathos of which consists in their representing genuine emotions by means of an essentially false language. The true Symonds appeals to us only when he describes nature ; then he is admirable in word and painting ; he has seen, and therefore he can speak. Everywhere else, in his volumes, the expression overflows, but does not charm ; it is the vocabulary of passion served up cold ; much rhetoric troubles the sense like a turbid stream, flowing over it. We put the book from us and forget its argument ; narrative there is none ; and the thought is diluted by floods of metaphor, not distilled into epigrams, or reduced to first principles, or set forth in the lucid order which understanding alone can give. Was not this failure ? Symonds, at last, lets fall his pen : "Literature has come to an end with me," said the tired virtuoso. He would fain withdraw from the battle ; but he remains "a naked soul," and suffers on, courageously ; not complaining, except to friends, who welcomed his Amiel-like monologues and laid them up in cedar.

"It is the centre of the soul that ails." He felt it deeply. Literature,

which helped to keep him alive, had by the subjects chosen — "Greek poetry, Italian culture in one of the most lawless periods, beauty in nature and the human form" — over-stimulated the imagination and excited cravings which it was powerless to satisfy. Under Oxford training, he might have said, as Socrates did of the fifty-drachma course at Athens under Prodicus, "The noble breed of heroes are a tribe of sophists and rhetoricians." The "literary viveur" cannot hope to produce a monumental work. He must endure a long regret "for sterner paths abandoned, and for nobler triumphs carelessly foregone." In such terms of resignation Symonds bids farewell to his ambiguous Muse, and faces the night.

Yet he enjoyed a sunset of fame, which spread over the evening-tide at Davos a certain splendor. Ordered by physicians in 1877 to take the long Australian voyage, or to winter in Egypt, some angel had guided him to the dry sunshine, the "snow-life, stars, and frost," and the silence, for weeks unbroken, which make up his picture of a student's sojourning in the Alps. Friends came and went; correspondence grew; the peasants around looked up to him for counsel and effective aid; he walked over the mountain vales; gave the cheeriest of entertainments in which high and low found a common interest; was open-handed, serviceable, alert in conversation, sympathetic towards younger men, and not envious. And though pain, on the most august scale, as he expresses it, searched him through, he could reflect that "in the five years since he came there dying," he had been allowed a "wonderful Indian summer of experience." As long again he was to fight his enemy; and while life burnt low, its heat and radiance astonished. His childhood tendencies to dreaming with open eyes returned. Thought, he says, in many kindred metaphors, "is the only thing, yet it is nothing." The real is far beyond appearance, and tragically hidden. Sometimes he escaped to Venice or London, but his

home was now in solitude. The illness or death of near kinsfolk — the loss of his eldest daughter especially — tried him; no loud applause greeted his ventures into poetry; and, while the last considerable work he put forward, the "Life of Michael Angelo," met with a recognition which its industry and exotic knowledge deserved, on the whole he had ceased to hope in immortality, whether of the kind which George Eliot celebrates in her curiously hollow strains, or such as Christians look for. How could he desire to live again, he asks; adding, "I should be always restless." He was, we have seen, "an optimist prepared to accept extinction." Strange optimist, who might have quoted the melancholy verse: —

Nec nova vivendo procuditur ulla voluptas.

He could not die too soon.

And so the "green tree of life" was shedding its golden fruit; "grey theory" clouding the sky over which swept those hurricanes of unbelieving yet tremulous fancies under whose blighting influence the spirit wasted away. He was a Stoic, nevertheless. "Do not," he pleads in a sad but strong letter to one who was tempted to go down the "inclined plane," "do not delude your conscience with the seductive dream of becoming corrupt." He knew well that Epicurean mood. And now he advises that intellect should conquer passion, the man realize his better self, and "sing to God." *Quis Deus?* That would be the natural enquiry. Symonds could never answer it.

A verse of his own "song to God," the words taken from Cleanthes, but the sentiment, pantheistic and stoical, long his ruling idea, is graven upon the tomb where he lies buried, not far from Keats and Shelley, in the Roman garden hard by the pyramid of Caius Cestius. For he died at Rome far from Davos and Clifton. It affirms the Supreme Law, and submits, — "Or if I strive, still must I blindly follow." One touch of the irony that pursued Symonds through life could not be

wanting; and his old Oxford friend and master, light-minded as always, seeing truth only in the luminous haze, wrote above this hymn of Pagan hopelessness, "Requievit in Christo."

We turn, with a sigh of relief, to "Marius the Epicurean." Here is the likeness faintly sketched of one that, living under the Antonines, walked in shadow, communing with himself, that hung upon the lips of Aurelius, and stood by when Fronto and Lucian discoursed, the one grave, the other mocking and satirical,—that could learn only through the eyes, and held existence for such a dream as will not come a second time, yet was so loyal to the spirit within him, so delicate, pure, and detached, as to fulfil the saying he had never heard, "Greater love than this no man hath," and to lay down his life for his friend. According to the students of manners whose biography we have just now dealt with, atomic scepticism unsolders our being; it leaves the phantom of self in a world without aim or substance; it is suicide. But Marius takes up his parable, and by dainty resolute cleansing of the sight, he comes to a vision in which there is the peace of the gods, "Pax Deorum." He dies a martyr, almost a Christian, who began as a devout acolyte of the heathen mysteries. From Aristippus and the Cyrenaics he had learned to renounce the Absolute; yet discovered in his brilliant, pleasure-loving comrade Flavian where lay the taint of Paganism; and in the soldier Cornelius, in Cecilia the noble Christian matron, saw the light breaking through which was to transfigure mankind. Never did he bring garlands to Venus's shrine. Yet it was his love of the beautiful which made him one in spirit with the "flores martyrum," whose fragrance created in the young man, as it were, a new sense, whereby things heavenly made him aware of their neighborhood. The sadness he dwelt in was shot through with gleams of hope, tender and bright as the morning dawn. For him, at the last, horizons hitherto undreamt of were telling of

larger skies; so that in losing his life he seemed to be finding it. This "obscure sense of possible sublimity," this feeling that, whatsoever point he gained, he yet "had something to pursue," to which our highest contemplative poet, Wordsworth, so often returns, we cannot—if we would measure its significance—liken to the submission that Cleanthes expressed, and Symonds has faithfully rendered. Somehow, it is informed, it is penetrated by the Christianity which was in the air when Marius lived; there is a heartfelt yearning in its accents, an aspiration, mournful and low voiced, to One who can hear and answer.

The book is a transparent disguise. We have no memorials of Mr. Pater, and to enlarge upon "his private virtues, the personal charm of his character, the devotion of his family life," will be, as we trust, the pleasant duty hereafter of Mr. Shadwell, from whose feeling preface to the "Greek Studies" we have taken these words, or of one as well acquainted with the subject of them. But, in "Marius," we cannot fail to remark suggestive passages, epithets, and axioms, which the author has made his own elsewhere. It is lyric and subjective. Is it also a recantation? Did Pater intend to tell us in his subdued way that he had exchanged the religion of sense for that of the spirit, "ideal form" leading on, as in Wordsworth's poetry, to "recognition of transcendent power"? There was need, if we may judge a doctrine by its popular consequences. A man of genius, undoubtedly; with narrow but intense eyesight; not unlike the master whom he followed, Gabriel Rossetti, in his self-centred style; slow to produce, but the outcome imperishable as sculptured marble; a recluse busy with his own thoughts, unwearied in rejection till the fit word shaped itself in light before him, Pater does not leave the critic questioning, as did Symonds, whether he will survive. He has written "ut studiis se litterarum a mortalitate vindicet." Who knows whether he may not have succeeded? More than one of his pages deserve to

endure while English is spoken or studied. "What care for style!" we may quote from himself, "what patience of execution! What stately and regular word-building!" His manner has nothing of the rhetorician. He never flows; the words, fixed and tranquil, look at you from a polished surface that hangs, like a picture in a gallery, always in its place, framed round about with gold, immovable. The current which makes music as it ripples along, is an exact antithesis to this firm, large drawing; it stays, whether you come or go; it has no motion.

For neither does the eye contemplating desire the landscape to move on; and Pater, by temperament and theory, is absorbed in the moment. He cannot tell what went before; will anything come after? He does not know. "To see the object as in itself it really is," he acknowledges for the aim of criticism; but, he goes on to say, this means knowing "one's own impression as it really is." And the reason is plain to him; we can never know anything else. What effect does this song or picture, this engaging personality in life or a book, produce on me? Does it give me pleasure? If so, what degree or kind of pleasure? Such are the questions which an æsthetic temperament, feeling or judging, will put to itself. More it need not enquire — not the relation of "engaging" objects to truth, experience, morality. When it has defined beauty "in the most concrete terms possible" — when, as an exquisite amateur, it strives always à *connaître de près les belles choses et à s'en nourrir*, it has fulfilled the whole duty of man as an artist. For, says the last solemn sentence in that book on the Renaissance, "Art comes to you proposing frankly to give nothing but the highest quality to your moments as they pass, and simply for those moments' sake." All is impression, sensation, — "a certain refined voluptuousness they have in them," observes Pater of the "great lords and erudite persons" for whom Ronsard composes. "Experience is ringed round for each one of us," he says

again, "by that thick wall of personality through which no real voice has ever pierced." We may give our impressions a pleasurable tone, if we know how; but to make them vehicles of the "not ourselves," be it righteous or unrighteous? Impossible! "This, at least, of flame-like our life has, that it is but the concurrence" — mark, we say, how absolute the knave is! — "renewed from moment to moment, of forces parting sooner or later on their ways." They meet, they part; the man is made by their concurrence; he runs down into zero when they dissolve.

Whoever wrote these words was assuredly a Pagan, and not of the highest. How can we arrive at stable realities in that "race of the mid-stream," and "drift of momentary acts of sight and passion and thought"? We never can, but a sort of answer is given by Epicurus, the philosopher of the dizzy whirlpool. *Carpe diem*, he says; fill the moment with as much pleasure as it will hold. For this purpose all periods and types may be equal, provided they yield the pleasurable sensations of which Humanists are in quest. "A refined and comely decadence" will have its place, side by side with the high exacting literatures, the severe philosophies, the works of art which, in their purity of perfect light, seem to reveal a world wherein decadence cannot enter. Even "the imagery of death serves for delicate ornament," just as "the grotesque details of the charnel-house nest themselves, together with birds and flowers," in the traceries of some mediæval architecture. And so, too, metaphysics may lend a hand to this kind of training, at once æsthetic and human, "not by the fancied gift of absolute or transcendental knowledge" — no; but by helping one to "detect the passion and strangeness and dramatic contrasts of life," always as an exquisite amateur!

The Renaissance, thus set over against all forms of the spiritual, derives its sweetness, we are assured, from the classic world. "Sweetness," here, and, in another place, "the high-

est quality," are given to our moments as they fleet, not by heroic conduct or transcendent moral choice, but by means of the works and affections proper to art as such. We have now, therefore, pretty well reversed the beliefs which were current among the orthodox. It used to be taken for granted that sweetness, or humanity, issuing in pity, forbearance, gentleness of demeanor, was, if not utterly the creation of the New Testament, at all events its chief and most gracious commendation. But perhaps a "languid excess of sweetness" may not be quite the same thing as humanity. Certain it is that to ascribe self-control or true affection to the hard, sensuous, showy men of letters or of the studio with whom we associate the Renaissance, would be much like attributing to physical science, as Symonds has done, "an extension of the province of love." On the margin of the page where we read this astounding sentence, a pencil has traced the single word "vivisection." Yes, we had better pause ere we fly to the science of phenomena for the golden rule. And the "sweetness" of sonneteers, poetasters, courtiers in the train of Nicholas V., or Francis I., or Cæsar Borgia, is, to apply one of Symonds's apt criticisms, a "specious shape that catches the eye but has no life." Such "sweetness" had Ludovico Sforza, who murdered his young nephew by slow poison, but was "so susceptible of religious impressions," Pater gravely observes, "that he blended earthly passion" with sentiments of piety. No wonder if he took for his crest the mulberry-tree, which yields flowers and fruits together! The example is by no means a solitary one. At this moment we are witnessing among French men of letters a "refined and comely decadence," which invites religion to the banquet where self-indulgence has exhausted the bill of fare. Symonds, in rendering himself with sharp words, which he often did, talks of the "putrescence in his own soul." Not a little of it came from the inversion of means and ends which is a consequence

when Hedonism shuts man up within the cell-walls of feeling. With all the resources of intoxication, these new-born gods cannot hold out; their diaries and poems abound in "the sunless pleasures of weary people," and their artificial, composite existence passes into stage-play.

Hence their fellow-feeling with ages of decline, their preference of the later Greeks to Homer; of Theocritus and the "Anthology" to Sophocles or Æschylus, — their admiration, which the mild-voiced Stevenson called merely quaint, of Tiberius and his dilettantism; their recurring elegies; and their melancholy. "This pagan sentiment," we grant in the author's language, does "measure the sadness with which the human mind is filled, whenever its thoughts wander far from what is here and now," supposing it has no intuitions of the divine. Our Humanist would fain linger "at home on the earth forever, if he could." And yet he must go; Nature says to him, "Lusisti satis, tempus abire." Death is in the cup which he puts to his lips; it infects his writing with a macabre taint. "The soul with all its maladies" makes of him an invalid. Ronsard's poetry is for the old who were young but yesterday; and the supreme Hellenic culture itself is "a sharp edge of light across the gloom." How deceptive a Renaissance, which promised eternal youth and behold the roses are falling from its chaplet! Shall we apologize for it by saying with Pater that "ennui attaches even to the realization of the perfect life"? That is neither sense nor philosophy, but it is a strong argument against Paganism.

And he felt it so, and passed on, through contradictions, with a faltering step, by the way of romance, or of the mystic, into a region which, when he wrote his original essays, he had not explored. "That sinister claim for liberty of the heart and of thought," — Antinomian, rebellious, — yet more than just if his famous epilogue (published, withdrawn, and printed again) to this volume may stand unerased, — that plea for boundless self-indulgence

so long as it is pleasurable, must at length be given up. "Get as many pulsations as possible into the time," he had said, — a doctrine fatal to men. Now, in the person of his self-denying Marius, he modulates into a higher key. There is a scale of pleasures. At one end we see the Roman multitude gaping with monstrous emotion as the sand drinks up the blood of their gladiators; at the other, Christian youths and maidens throw away their lives joyously, in the amphitheatre at Lyons or Vienne, finding a happiness in dying for their Master. On which side is the pretended Epicurean? Is he but doing homage to his fine taste, not his conscience, when the Coliseum rings with a cry for blood and he will not echo it? No, he looks at the indifferent emperor, sitting there unmoved, and from that hour he cannot praise the "Meditations" of Marcus Aurelius except with a frigid or an angry brow; he is almost unfair to the man, — a philosopher, not human but merely ascetic! "Vale, anima, infelicissima!" murmurs the indignant youth, as he turns from the Palatine to pursue a journey which will lead him down, through the house of Cecilia, to the catacombs. He wanders on, by the path of enthusiasm for his brethren, with the new faith already throwing a gleam over his pallid features, to the martyrdom for which his life had been a preparation. His scale of pleasures will never allow him to sadden a living thing; his eyes are forbidden to look with delight upon anguish or the unclean.

Remarkable enough! Our most unbelieving century, as Von Hartmann defines it, cannot have done with religion; whether it paints, or sings, or argues, in its discussions on the price of bread and a fair wage, to the question of questions it must return. Symonds, we are told by his admiring friend in the biography, had one "dominating pursuit, — the interrogation of the Universe, the search for God." He flings from him with disgust the "smugness of Agnosticism." Were men satisfied to be Atheists, the

melodious dithyrambs of Mr. Swinburne would never have awakened curiosity. And here is the lover of fair aspects, to whom enquiries beyond the passing delectation should seem as aimless as impertinent, pencilling, in a series of delicate scenes and groupings, what a mediæval saint has described as the "*Itinerarium Mentis in Deum*." The interest we feel in Marius centres round this problem. He is a born heathen, but temperate, steady, abounding in the milk of human kindness, who, from the outset, has a deep sense of responsibility towards the world of men and things, and is gentle and unselfish. By what steps shall such a one arrive at the new discipline, which is taking hold of men everywhere "in whom God is well pleased"? That he learns while still a boy, in a retreat, or Pagan monastery, where he has for his director a young priest of *Æsculapius*; and the rule runs, "Thou shalt be made perfect by love of visible beauty." We have come again to the heart of aesthetics. How is the Fair likewise the Good?

Not this story alone, but his "*Lectures on Plato*" and his "*Greek Studies*" prove how constantly the writer was busying himself — surely because in some degree perplexed — with the riddle of which art, philosophy, religion propound their several solutions. Without the sensible, no interest for man; he must be kindled by feeling, or remains a statue blind and dumb. Nevertheless, sense consumes the spirit, and at last blots out every trace of humanity from the countenance. Shall we, then, take our flight to the abstract? deny sense, and live a Spartan life, untouched by these singeing flames? That is to die ere our prime, or never to have lived at all. Sparta was a monastery, cloistral, severe; but not the "eye of Greece, mother of arts." Hence, also, "amateurs everywhere of the virile element in life, the Lacedæmonians impart to all things an intellectual character;" they worship the practical reason, not routine. But they remain hard and unsympathetic, — even Euripides, though he draws

their pattern youth in Hippolytus, calls them "hateful to all men." Nor will the Renaissance, steeped in fire and passion, which Pater adorned with his arabesques of chosen words, find much to imitate among the Lycurgans. Yet we now seem invited to believe, that since it was the design of such training to promote "honor, friendship, loyalty to the past," and since it ended in making each man "himself a work of art," more exquisite than dead marbles or Sophoclean tragedies, why, this will be Marius the Epicurean. At all events, we say, he will not be Filelfo, Becadelli, Aretino,—he stands before us self-discipline personified, not self-indulgence crowned with fading blossoms.

Marius would have finely puzzled the Christian apologist of days not so critical as our own, entangling him like a *retiarus*, in network which his leaden sword would in vain have attempted to cleave, and that by no argument save the story of his own bringing up. Now we perceive that the true preparation of the Gospel was in such lives. Had the old religions of heathendom been utterly vile; had not grave and touching inspirations lurked in the Roman country festivals, rude as they were, in the silence and the ceremonies about the rustic altar, in those brotherhoods, Pythagorean, Æsculapian, which laid a rule upon their adherents, strict, if not always observed; had the "most religious city in the world" never lighted up that divine radiance, clear, and as if pensive with a personal feeling, that in Virgil subdues while it melts the reader, and is touched to devoutest issues, where could the message of prophets and preachers awake those slumbering echoes that in time gave back so mighty a sound? The fierce Montanist—a Puritan born out of due season—would pull down and break in pieces all that he deemed hostile to his creed. Happily, a larger spirit, discreet and patient, curbed the iconoclast. No breach so violent as that which opened a yawning gulf between modern and mediæval,—to our loss, we are assured by the wisest,—

divided man from himself when, taking in his hand the lovely flowers of poetry and ritual, the lights which had burned before ancient shrines, the sweet-smelling incense, he came into the holy place which all these were to adorn. In the life-long wanderings of Marius there is not one pearl of price, one element holding of the beautiful, that he is told to cast away on entering the Christian temple. Dimly, without grasping the profound principle of an order in things, which made so strong an impression upon Augustine—who was thereby enabled to escape the Manichean argument, and to distinguish between self-culture and surrender to impulse,—Marius learns to refrain, but the end is that he may enjoy according to right reason.

His heart opens whenever the "influences of the beautiful" are poured abroad; and yet he can be stern with himself; his eyes shall look on nothing base, the body shall be dedicated to health and purity; "unseen moralities" stand behind the symbolism that gives him content. His home at White Nights, and the memory of a noble mother, keep him "serious amid fopperies and languid days." Already, some new word is wanting to express the spirit in which he contemplates existence; if he is not a "spiritual man," he dwells within,—in the shade, *umbratilis*; and his aloofness from the crowd, his freedom while pursuing the mimic rivalries of school and fashion, make him a spectator, when he might be an actor, wholly absorbed in the world's services. The temptation of youth is to spread itself out in sunshine, wasting and wasted; to say with most Epicureans, "Let no flower of the spring pass by us." Not so this careful appraiser of the value of things. He marks in his first-loved schoolmate, Flavian, "as it were an epitome of the Pagan world,—its depth of corruption, its perfection of form," and he turns away, distressed, with a condemnation which is heightened by after-knowledge of Christians like Cornelius. Fortune brings him across the "Golden Book," in which we read that con-

summately perfect legend, "where more is meant than meets the ear," of Cupid and Psyche. To him it is a romance, not so much because it tells in dainty Latin how "the course of true love did never run smooth," as by its mystic passion, full of awe and tenderness; such a god was he whom Dante beheld, "the Lord of terrible aspect," not a child playing with fire-tipped arrows. The dedication to things beautiful must henceforward take into its scheme grief and trial; without them no perfect life is conceivable. Thus, in spite of the unhandsome stains that defile Apuleius, a fair soul knows how to derive its proper nourishment from pages too often, like those of Boccaccio, better left in their dust.

Still, when Flavian dies, the young philosopher, who had been writing down at his dictation a chant of love and life, the "*Pervigilium Veneris*," can no longer hope. That friend, he mused in the Lucretian vein, "had gone out as utterly as the fire among those beloved ashes." Heracleitus, not Socrates, reasoned well. Things are in a perpetual flux; if the moment be not its own end, there is no other. But the conclusion, then? Aristippus gives it. Fall back on direct sensation; the blue sky is overhead, "let us eat and drink." Only there is still a choice in our eating and drinking; the "sight of perfect men and things" may be a kind of religion. It is the philosophy under whose influence Pater composed his first writings. How the bowman can shoot to any purpose without a mark, and whether, if there must be an aim in our action, the flux itself may not have a tendency, — a law of direction, — and so, at last, a reason which will account for it, the author was still to investigate. He has made some steps towards this view, though not reaching it exactly. "You may always pit form against force," said Mr. Ruskin, with admirable precision. Form is order, and means stability, the constant which Marius was ever seeking. The law of the beautiful goes beyond sense; it is in

the mind, not in mere sight. Here is our first answer to the enigma.

But order, though excellent, is impersonal; it will not suffice. The Stoic who ruled mankind, as in some weary service of the gods not answering him, Aurelius, believed in law and order, wrote "*Meditations*" on the "city builded in the heavens," and was a prey to melancholy, though exclaiming almost in Hamlet's famous words, "'Tis in thy power to think as thou wilt." So he deluded himself, being all the while "a comfortless shadow," eaten up with sadness. Where was the city to which he belonged? It was not Rome. Marius began to look round for it; his early self-contained existence he would now gladly merge, though not confound, in the brotherhood of man. So much he had learnt in the lectures delivered by his imperial master. But something more was needed. Fronto, like a second-century Rousseau at court, enlarged on the old moralities as recommended by their charm to sweetly sensible persons, unable to believe in dogma. We can assent to them, he said, and we ought, as a matter of breeding. His meditative listener concludes that the will, even where beliefs are concerned, may shape the deed; will is, perhaps, vision, he argues. These fresh and determining elements had no place in the philosophy of Aristippus. They bind past and future; they speak, not obscurely, of a communion in which men's thoughts flow to and fro, even as we all breathe one vital air. And the great system existed before Marius; it will survive him; it is in "impregnable possession" of the world. After all, the lonely monad which he took himself to be was an idle dream; and he is not solitary. With the new acceptance of a world outside, comes Apuleius, whom he meets at dinner in a friend's house, situate on pleasant Tusculum, — comes and would transform the Platonic "ideas" into "powers" demonic; a suggestion his old admirer does not embrace, yet will leave open as he begins to see infinite possibilities beyond the Heraclitean moment. What

he longs for is to experience the divine ; as that mystical outcry expresses it, " O amare, O ire, O ad Deum pervenire ! " And has he not, all along, had an unseen companion ? With Hippolytus he might say to the deity, " Thy voice is sweet in mine ears, yet never have I looked upon thy face ; " there is, then, an unknown Eros. The crisis which these stirrings of the heart betokened was upon him. He sees the Christian Liturgy ; hears the prophecies of a time that is to be ; recognizes how those common things, bread and wine and oil, the substance of every day, may be lifted up till they become heavenly mysteries. In a vivid and touching scene, — the nearest approach to artistic vision which the book contains, — he is present while the disciples set forth, according to the ritual of the Church, their beliefs, their unity, their worship of One who is not far from them. " All that was deep-felt and impassioned in the experiences of the past, " was here summed up and realized, but in a living figure. And Marius knew that he should require no less than this from the powers which had brought him into the world, if happiness were not to be denied him forever.

We are a long way from the Renaissance. Here is, indeed, a soul worn out with much travail, but willing to give up the vulgar delusions, and be at peace. He has turned completely round, if we view him now and in the days when he thought of making the hours yield their utmost, " by dexterous training of capacity. " This perfect sight which he has seen is a prelude to the tragedies, beautiful if the eye that studies them be enlightened, but in themselves clouded with shame and horror, of which the " *Acta Martyrum* " will hold a record. He, too, is set down for his part. By accident, in a popular tumult, away from Rome, he and his Christian friend, the centurion, are arrested. He so contrives that the other shall escape ; is himself roughly handled, taken for one of the new sectaries, released in a state of high fever, and left among Christians. And

he dies with their sacrament on his lips, their prayers murmuring in his ears. It is a good end. He does not complain. Surely, he says with a sense of gratitude, life had been with him a success. For him the unknown has lost its terrors. " The unclouded and receptive soul was quitting the world finally, " with fresh wonder as when it began its course, and if still with a conviction of the profound enigma in things, yet taking this for " a pledge of something further to come. " Marius, we may conclude as did his tender brethren, fell asleep like one that hopes. He had but passed through the veil, from the seen to the unseen, from time to the eternal.

Grace and charm, assuredly, are not lacking to this delineation of a " soul naturally Christian. " The manner, we allow, has caught some of Apuleius's gold thread in its tangles, and is not unaffected. A sentence up and down the ornate pages leads us to suspect that Marius, if he had fallen under the spell of a strong personality, — which he never did, — might have lost his " remarkable self-possession. " He was at no turning in life severely tempted ; he came to the new doctrines not like a penitent convinced of sin, but with an unsullied past. Still, he is sympathetic, humble, almost we had said, contrite. Any one less resembling the decadent Humanist it would be hard to imagine. And herein lies the moral of this whole story, — of the æsthetic movement also, and the two distinguished writers whom we have taken to body it forth, " in the most concrete manner possible, " that we might not go astray while judging of its principles.

That movement, then, like the Renaissance, which, on a limited scale, it has striven to imitate, will be sketched in a phrase, if we call it the false Platonism. When Symonds sat up all night to read the " *Phædrus* " and the " *Symposium*, " finding there a revelation for which his heart thirsted, we may be certain that he dwelt rather upon the visible aspects which to Plato are only the beginning of wisdom, than

transcended them and rose into the "kingdom of ideals." In like manner, it is Aristippus, not the forerunners of Plotinus, who lays his enchantments upon Marius the Epicurean. All these are in love with the outward sign, not the inward grace. And of each it must be said until they change, "*Dilexit vanitatem.*" They sacrifice the Good to the Beautiful; that is Hedonism, in literature as in life. To the form they sacrifice the substance; that, in moderation, is the prettiness of Euphuus; in excess, it is decadence. If thought be one element in all true art, and technique another, to them technique is the sole object, thought may be wanting. In a word, they are dominated by impressions, by music which intoxicates, by scents and savors which leave them spell-bound, by sensuous delight in which reflection has no place. They reverse the order, and pervert the intentions, of nature. For this is the order established in things, that feeling shall serve faculty, faculty shall go forth into action, and action build up character in a world of self-determining individuals whom the law of reason guides to their end. The outward show is an occasion, not an adequate cause, nor an effect in which we should rest wholly. And who are the supreme artists save those that paint, and carve, and sing with their minds open to a world of divine exemplars, not to be simply given back in lines or contours, in colors or sounds, or in any earthly vehicle, but to be hinted at, suggested by imperfect devices, and, so to speak, called up in the remembrance of their fellows, not exhausted in a solid something, complete where it stands? Such is the doctrine of the "*Phædrus*" as expounded in a glorious parable by Socrates, according to whom the idea of a scale, of progression and ethic choice, alone will deliver the human soul from perishing with the beauty which has ensnared it.

And the latest experience, startling as with a thunderclap our languid society, bears out his warning. If feeling, so long as it is pleasurable, remains artistically just and true, there

is no perversion too monstrous for some school or other, of virtuosi and exquisite amateurs, to find delight in its cultivation. What are the fruits of that philosophy? The desideratum, at last, will be "strangeness,"—the artificial, the high-spiced,—imagination feeding on the forbidden. Not the scale of idealism, but the demands of intellectual sensuousness, will give to objects a value and an interest. And whither can such an "inclined plane" lead except into the abyss, "*dov' e bello tacere,*" as Dante says? Virtuous, self-respecting heathen would not have borne to be under the same roof with the pattern Humanists who degraded literature, and achieved the decadence of Italy, four hundred years ago. Would they be more tolerant of unhappy moderns, fashioned according to the maxims with which Symonds, or Pater, set out? The reader may judge who will compare such sentences as we have quoted from their Epicurean pages (and they are samples of a large bulk), with classic lines and grave reflections in the tragedies, in Plato himself,—in Aristotle, who has laid down the only true, because the one reasonable, doctrine of aims and actions; in all to whom the Cyrenaic adornment of the cup and the platter, filled as they were with all uncleanness, seemed, long ere the light of Christianity arose, detestable and inhuman. Culture without principle is a wrecker's light. Dilettantism, regardless of ethics, that is to say, of the something which makes us human, turns the finest knowledge, and the natural desire of man to embellish and sweeten existence, into a subtle poison,—"*art after art goes out, and all is night.*" Had there been no Pagan Renaissance, Europe might have spared itself a Puritan Reformation. It was the men who despised religion that ruined art, and furnished an excuse for banishing innocent joy.

The same danger, and a not unlike dilemma, threatens now. It cannot be denied that shallow young men, whose acquaintance with Greek and Latin would not bear half an hour's examina-

tion, and whose passion for the fine arts is obviously affected, have learnt their false Platonism from teachers no less cultivated than Symonds, and as reserved in style as Pater. The stream of tendency has caught them; and not a few are drifting downwards,—some have been already swept away. They begin with Aristippus; they end, as Leopardi ended; the next world fades into darkness, lighted by no sun or star. Most miserable of all, the sacred name of friendship is profaned on the abused authority of Plato; and a savor of death lurks in the most unselfish of relations, now disengaged from its human and ethical meaning. Yet Plato has warned them repeatedly, in words not unbecoming a Hebrew prophet—"Ut quid diligitis vanitatem, et queritis mendacium?"—that the penalty of mistaken ends is ruin. We may number some of its consequences as we turn the leaves of this "Dichtung und Wahrheit." They are moral relaxation, effeminacy, sickly self-consciousness, morbid tastes, *tædium vitæ*; the hope of annihilation which had rather die than live; complete dissolution of soul; "moments" only, not even the "states" which materialism would grant,—how much less energy, or sovereign self-direction according to the moral law, or life everlasting?

And yet, these two famous Humanists have recanted: the one by casting literature and art from him as inferior to the meanest action; the other, by leading his Cyrenian youth along paths of sympathy and self-denial, into the communion of saints and martyrs. The final verdict, which, however, was not given until, by preaching culture as a religion, they had stirred up the uncultivated to denounce even legitimate art, is that which the long tradition of reason and Christianity has recognized. We are still encouraged "to live in the Whole, to practise the Good, to delight in the Beautiful." Yes, but it needed no Goethe, if we knew our Augustine, to come from Weimar and teach us that. Rather, it was needful to understand

this great sentence truly,—not to imagine the universe a perpetual flux with none guiding it; or the Good an impossible sum of pleasurable sensations; or the Beautiful that which steeped the eyes and heart in dainty feeling, but had no message beyond itself. And though we cannot but experience a pang, when the ice-cold pages of his biography tell us how one of these men failed to find happiness, nor can help rejoicing when the other, in his romance, seems to have discovered an escape into the light, still it is melancholy to remember how many have followed them along slippery paths, not turning back when they turned, but going on, like Hippolytus, towards the great deep, yet, unlike Hippolytus, not innocent. For, as Socrates told them long ago, the way is nothing worth, and the end destruction.

From Temple Bar.

THE KING OF FOULA.

I.

JOHANN ERICSSON had education, and he leaned forward on his stool to the glow of the wreckwood fire, and spelled through the twenty printed lines of the notice in a little under the hour. His mother the witch was there, with the goat rubbing against her knee; and Andrew Johnsen and his girl sat on the edge of the bed-bunk; and Neil Merrilees and as many of the Foula notables as could squeeze into a room twelve feet square, kicked the calves into the open, and stood so close that their cowskin *lapparsko* made a carpet for the earthen floor. It was a most representative meeting, and when the reading was done, they agreed with shouts that the County Council was an engine of tyranny invented by Queen Victoria without any sort of license from her subjects.

"It's not to be stood," said Johann Ericsson. "The calves and the chickens have always lived in the houses with us. This County Council Thing

does not understand. They grow and increase better in the houses than anywhere. We will not turn them out."

The assembly rumbled out an emphatic "No."

"Then," said Johann, "we will tell the County Council that this is what we do with their notice." He slowly and elaborately twisted the paper into a torch and thrust it out to the whispering flames of the wreckwood. His thick brown fingers trembled nervously, and his face (where it peeped through the hair) glistened with little beads; but like a man who has strong convictions, he held the ukase to the blaze till every scrap had turned to black, squirming cinder, and then turned round on his stool and looked for approval. The fire-lit crowd rumbled out disjointed comments from here and there, but for the most part blinked in uneasy silence. Andrew Johnsen's girl from the bed-bunk whimpered and dropped two stitches in her knitting. The old witch, Johann's mother, alone found noisy voice.

She cried out that evil would come of this thing. She had heard from her mother how the English hanged the Highlandmen on the hills to the southward when the trouble was in the '45. And her own lean, shrivelled neck was aching that minute. Johann was all she had left out of ten men-bairns. The sea had got the rest—six from the boats, and four from fowling on the cliffs—and now the last had given himself up to the law. She was a miserable old woman, and she had lived a hundred years, and she wished she might die just then and be spared this last trouble. Only let the English take care what they did to Johann. She was not dead yet. She spat venomously at the fire from between her toothless gums and relapsed into mutterings.

The crowd held its breath and listened for more, but that was all they heard. Johann Ericsson's mother was a power amongst them; and because the islanders believed in her they were frequently cured of their lesser ailments by fetish and spell. She seldom

spoke at all, spending most of the time cowering over the fire, like a decrepit hen, and so her words got value from their rarity.

The chickens, who were roosting on the beams above, were encouraged by the silence, and began to cackle amongst themselves; and Andrew Johnsen's girl rubbed her nose with the back of a brown hand and commenced to whimper afresh. No one took any notice of her, and after a while she slid from the edge of the bed-bunk and passed through the door to the night outside. Doyme the sailor followed her, and Johann Ericsson, with his back to the firelight, watched them both and scowled unobserved.

One by one the rest of the audience trod silently away in their skin footgear, till only Neil Merrilees, and Johnsen, and Johann were left. The old witch still mumbled over the fire; but these three gathered in the shadows which filled the further angle of the room, and sat on the fodder which lay ready for the calves, and plotted high treason against the queen and the imperial government. Also they spoke of marriage: "For if this comes off," said Johann Ericsson, "I must have your girl, Andrew. Being what I shall be then, it would not be right for me to stay a lone man any longer." To which Johnsen answered "No," and hooked his fingers in the mat of his hair, swinging it thoughtfully. But he did not make any more definite reply. The idea of seeing his daughter a queen consort did not completely dazzle him.

That night the island felt the first throes of revolution. Men slept little, and the grey Atlantic beat the cliffs with a tearing gale. The last was the normal state of things; the other was a new feeling and a terrible one. The whole matter arose from some legislators having made laws without understanding the people they legislated for. In London an edict against "harboring domestic animals within messuages or other dwelling-houses" would be quite allowable. In this other society it was looked upon as a piece of tyrannous barbarism. You see Foula,

though an integral part of this empire, lies twenty miles west of Shetland mainland, and from climatic and ethnographical reasons has customs of its own. If the island were flat it might support a decent population; but as it is tilted up (apparently by the hammering of Atlantic surf) till the western flank rears fifteen hundred feet towards Heaven, two hundred and fifty people are all who can find lodging and sustenance. These neither increase themselves, nor do they encourage immigration. From the days when they came out of the East in long ships, their government has been practically patriarchal, with respect paid to the heavier hand.

At the beginning of this century the folk of the island had not ceased to speak Norsk, and even to-day they use idioms which are omitted from the phrase-books. Civilization is certainly spreading, because after many years of asking they have now a fortnightly mail. They do not write letters, or read them; for reasons; but they are proud of this mail. It is true that the fortnights are usually far apart, because when the wind is anywhere between north and south, though east, there is no landing on the rocks for anything except a dead body; but the fact of the mail's running is entered on official lists and looks well there.

Now Johann Ericsson was a man of power and a man of substance. He had a thirty-foot herring-boat, with a spare suit of sails lying by; and his patch of upland was capable of grazing eighty sheep. He owned, moreover, the only wheeled vehicle on the island. There are no roads in the place; there was not so much as a Shetland pony; but the possession of that battered, low-wheeled gig gave him tone. He built a shed of granite and turf and wreckwood especially for its maintenance, and the bare-legged children were brought to see the thing as part of their education. The view was considered a mild sort of foreign travel.

Johann felt that he was born to be a leader of men; and he said so openly. The islanders were pinned on Foula

by the gale, and Johann went about amongst the scattered houses on the bleak hill face and preached red rebellion at each in turn. As he had noted in the course of sixty years, they were a self-supporting community. He urged that the potato-grounds, the sheep-flocks, the cod-banks, and the herring-shoal supplied all their needs with the one exception of tobacco. Even whiskey they could make if the government reverted to their own hands. He promised to set up a still himself the day independence from the British Confederacy was declared, and exchange the spirit at the rate of a gallon against one cran of herrings. Then they would owe allegiance to no one. They would be their own midwives, weavers, grave-diggers; and they would set up one man out of themselves to govern all, just for the dignity of the thing.

There were not lacking objectors to this dazzling scheme. They arose not so much through any strong feeling of loyalty to the old order of affairs, as from some dumb feeling beneath the ribs which the owners could not accurately define. They were the inevitable outcome of events, because nature has decreed that no government shall be set up in this universe without an Opposition being immediately evolved to hamper each and all of its movements. But the Opposition in Foula was not virulent. It had neither Irish eloquence nor Scottish stubbornness, and its leader, Neil Merrilees, was Ericsson's particular friend. Its principal use seemed to lie in raising objections in order to give the would-be king the glory of shattering them.

"Yes; but Johann," Neil Merrilees would say, "if we do this thing, they will send the policeman over from Scalloway, and he'll carry us away before the procurator-fiscal in Lerwick."

"If the policeman comes, he must be beat about the head and sent back."

"It's all very well to talk like that," said the Opposition doubtfully.

"I'll beat the man myself," said Johann Ericsson.

"Would you now?" said Neil.

"'Deed and I know you're a strong man when you're roused, and bad to bind. But supposing you did beat the policeman, the English might send more than him. They have their ships, you know."

Johann did know, and he had waited for this opening. He painted the queen's navy in all the colors of ridicule. It was represented in that quarter of the ocean by a Fisheries Protection cruiser, a mere derision of a gunboat with no guns worth mentioning, and the speed of a drifting barge. She was eternally chasing peccant smacks, and eternally being distanced by them. All the islanders knew her, and they chuckled heavily when Johann poured biting satire on all her powers.

"Let her come!" he exclaimed; "let her blaze off her tinpot guns, if she does happen to have powder and a stone or two on board. She can do us no harm."

Moreover, he said, they would take care that none of her people landed. There was only one spot on all their rim of coast where a boat could be beached even in the mildest of weather. They must build a wall across that, with a gate in it, and then ten men of Foula could hold their island against the crews of ten such gunboats.

The words were spoken with a burning force, and a feeling crept into the island blood which had been dormant there for centuries. It was the old Norsk lust of battle. These shaggy, ragged, uncouth farmer-fishers felt their gorges rise against all foreign peoples outside their own rock of an island, and instinctively gripped their fists and peered with fierce, scowling looks at the other coasts beyond the sea. And then with Johann Ericsson to direct, they began to raise their defences.

The wall grew stone by stone across the only landing-place, a ramp of a fathom thick and two man's lengths in height; and the builders clinched their teeth as they thought of the time to come when they would be called down

to defend it. Neil Merrilees became the fiercest patriot of them all. He it was who remembered an old wild song of blood and raid, with a lilt to it like the clash of oars on the swing of the sea, and he sang it as the men heaved the boulders to their resting-places on the growing wall.

One man alone on all the island cared nothing for all these things; scoffed indeed. He was an *udlending* — a foreigner — an Englishman, wearing the name of Doyne. He had followed the industry of the sea, and had been spewed up by it more dead than alive into a cranny of the western cliffs. A fowler named Lars, a half-witted creature, had seen him, craned him up in the bight of a rope, and brought him to his house, and fed him there upon cows' milk and gull-meat. That was a year back, and he had stayed with Lars ever since, doing odd jobs at intervals, being a very handy man all round when he chose to work. In his way he was a comely fellow, and, with limitations, clean. He could not shave, because there was no razor on the island, but he trimmed his hair and his beard with scissors, and on Saturday nights he washed himself. Also he wore blacked boots with high heels, the only ones on Foula. These matters made him distinguished.

The women looked up at him as he swung past them, instinctively doing homage to spruceness; and one of them, in her clumsy way, loved him. This was Andrew Johnsen's girl. Doyne was soon aware of it, and the girl did not mind. There is little disguise about these matters amongst primitive peoples.

On the day when the wall was being built, Andrew Johnsen's girl was hoeing in a potato-ground. It might have been noticed that she hit more potatoes than weeds. Her eyes were wandering, and by sympathy the hoe wandered too. Doyne was lounging about the furrows with his hands in his pockets talking to her.

"I'd marry you, my girl," he was saying, "if I saw the way. But I don't, and that's flat. We couldn't,

the two of us, live in Lars's bit of cabin with him there as well."

"Andrew says I shall have to marry Johann Ericsson one of these days soon," said Andrew's girl miserably.

"D'ye want to then?"

"No, I don't."

"Why didn't you tell 'im so?"

"I did; said I wouldn't have the old hunks to be my man if there wasn't another living. But Andrew said I shouldn't be able to help myself—nor'd he. Johann is going to be a king or something, and can take what woman he chooses."

"That swine a king! By God, I could make a better out of putty and spun-y'n! By God, I've seen a born king on the West Coast that come into the fo'c's'le and swapped calabashes and monkey-skins for a bottle of Hollands gin and an old Jew's cap, and I hit him over the nose when he got in my way, and I'd do as much for this swine any day. Yes, or shove a knife into him, either, and get thanked by the beak for doing it, if he sticks to the fool's game he's on at playing now. D'you know it's a felonious offence to talk about the blessed queen the way that swine's doing, my girl, and he lays himself open to getting his ticket dirtied very considerable. I've seen men in Liverpool lugged up before the beak and given three months with ginger for a lot less."

Andrew Johnsen's girl flushed with pleasure. "The durned old hunks," she said softly; "I'd like to see you lay for him!"

II.

THE independence of Foula had been declared for a whole month, and the patriotism of the islanders had waned most sadly. The blessed gift of liberty had palled. They were no better off than before, and the king's exactions at times lay heavy on them. Moreover, through lack of various materials he had not set up that promised still.

The excitement had died away, and the Revolution lay sour in their mouths. For a long time the fear of

bombardment by the outraged forces of Great Britain kept them warm. But twice that graceless gunboat had steamed past, once in unsuccessful chase of a poaching ketch, and again on her return to Walls, and both times contemptuously ignoring their very existence. On the second week of the rebellion a boat's crew had slipped across to Scalloway and purchased a copy of the *Shetland Times*; but even in that intensely local print not so much as a paragraph chronicled their defection. And there was another cooling influence nearer home in the tongue of the sailor Doayne. His ridicule was of the sledge-hammer sort which went home to them.

The men had taken it in turns to mount guard over the wall, each standing a four-hours' watch. At first the novelty pleased them, and they swelled with dull pride at being their country's defenders, and tingled at the thought of a fight. But afterwards when the newness wore off, and nothing came but the noisy skuas and the other sea-fowl to eat the fish-offal in the morning, they grew wearied with the task, and more and more sluggish in its performance. The chills were coming after the fever. First one made excuse and another stood his watch, and then more slid out of the rota, till at last none were left. It was exactly a month since the wall had been reared across the landing, and that night Johann Ericsson was forced to stand sentry himself, or leave the island unguarded and acquiesce in the fiasco.

The crisp Atlantic gale with its piquant taint of seaweed came down to him over the roof of the island, and fluttered his grizzled beard and unkempt hair. His eyes glowered out over the tumbled waste of sea at the dim line of the Shetland hills beyond. Out there was the world he had heard of, but never seen, and he hated it with the fierce aching hate of a man who has expected fame as a patriot, or at least as a rebel, and instead of either, has been coldly ignored. The boom of the wind as it beat the clouds together

overhead sang to him a tale of failure and scorn.

He had lusted much to be a king, but he had striven for one other thing still more. He had passed through sixty hard years of life without feeling the need of it, and now when his time came, the plague of love had entered into him, heart and bone. For a whole year this hunger for Andrew Johnsen's girl had gripped him like an empty belly. Time after time he had wooed her, flaunting his wealth and his social power; and time after time she had flouted him with all the freedom of island courtship. That memorable night, a little more than a month back, when the notice from the County Council withered in the wreckwood fire, he had tried to coerce her father's influence; but Andrew refused stolidly to commit himself. Afterwards, when he had proclaimed himself king, and the islanders with sudden heat had hailed him with wild cheers till the seafowl flew screaming away far over the rim of the crags, he had tried to assume czarlike power, and demand this woman for wife as one of the dues of office. But Neil Merrilees had shaken his shaggy head with decision. The monarch of a free state must win his bride with the bride's free consent, as did other people.

Johann muttered in his beard and said no more. His power was too raw-new to bear any unpopular strain just then. But afterwards when it was more firmly established—then—yes, then, no one should thwart him.

But meanwhile, it was only with a heavy effort that he kept this new, wild, fierce love of his in any sort of check. The raiding spirit of some viking ancestor bubbled under his ragged homespun, and he longed every time he met her to pick up the shrinking girl in his strong old arms, and press her closely to him, and carry her off in grim defiance of all her world and his to the house where the old witch cowered over the wreckwood fire. Yet every day he saw the chance for doing this wrested further and further from his grasp. His power was not growing

strong with that speed he had reckoned on; instead it was dwindling; and he watched its wane with a wrathful petulance.

That day he mounted guard alone on the wall at the landing he knew his last chance was gone. If only the English would come and take him away, and hang him as his mother said they did the Highlandmen in the '45, he would go as a willing martyr. But the great blind power in London would not even grant him this boon. They would not deign to lift an eyelid at his rashest deed.

He sat brooding above the gateway of his kingdom till the dawn glared out over the Shetland hills, and then sliding stiffly and wearily to the ground, he went up over the pink sea-daisies to his house on the mountain-side. A thing had happened there which on another day would have been a cruel blow to him; but on the dulled nerves which were in him then, it came as scarcely any shock at all. The bent, withered form that he was accustomed to see crouched over the fire was there no longer; it lay on the earthen floor stiff and cold; and, as he thought, comely in death. He was a king no longer, and it seemed best to him that his mother should not live to see his shame.

He knelt and kissed her reverently, and went out amongst the houses and fetched the women to do what was useful. And in the mean while he moved about like a man dazed and dreaming.

Two days later they buried her, and that night, when all the island was asleep, Johann Ericsson took his thirty-foot boat, and bent the new suit of sails, and sailed into the unknown south till the Orkneys rose, and Foula sank like a pin-dot beneath the sea. But where that herring-boat's keel ground on a beach no one on the island ever knew. Johann had left in his house a message, and when the time came, Doyne the sailor spelled it through, and Andrew Johnsen's girl, and Neil Merrilees, and as many of the folk of the island as could crowd into

the narrow room listened to the reading.

"He's cut and bolted," said Doyne, "that's what Johann's done. And he's left his croft, and the sheep, and the billy-goat, and his peat-stack, and that wreck of a gig, and all the other truck to me and to no other. Just think of that; the durned old fool!"

The Foula notables rumbled out their notes of astonishment, and Andrew Johnsen's girl came up and laid her brown cheek on the sailor's shoulder.

"Well, my girl," said Doyne, "I suppose I shall have to marry you now."

C. J. CUTCLIFFE HYNÉ.

From The Nineteenth Century.
STARS AND MOLECULES.

BY REV. EDMUND LEDGER.
GRESHAM LECTURER ON ASTRONOMY.

ONE of the most remarkable features in the recent progress of astronomy is the way in which it has shown that the greatest and the smallest things in nature are not at the two extremities of a long-continued upward slope, but are mingled in the closest intimacy. Astronomy illustrates the phenomena of electricity in a comet, of heat in the sun, of light in a star or a planet, of gaseous radiation in a nebula, upon a scale which is immensely great, by means of the violent encounters or collisions, or (in plain English) by the *knocks* of most minute atoms and molecules.

In astronomy we have to do with the greatest things in nature. The sun is ninety millions of miles distant from the earth, and of a bulk one and one-third million times as great. The planet Neptune is thirty times as far away as the sun. The nearest to us, so far as we know, of all the stars (*α Centauri*) is well-nigh ten thousand times as distant as the planet Neptune; while beyond it are hundreds of millions of stars further and yet further off. Some that can be just detected are probably ten thousand times as remote as *α Centauri*, or, in other

words, three thousand million times as far away as the earth is from the sun.

But the light that comes across those distances, and reveals those far-away orbs, reaches us through movements and vibrations due to molecules far smaller than any microscope can reveal. That light shakes the minute molecules of a photographic plate placed in the focus of a telescope, and leaves behind the record of its knocks. It vibrates in the bright lines of solar and stellar spectra. In a no less wonderful way molecular knocks—most minute, but most numerous—transmit and maintain the heat of the sun and of the stars.

But it may be asked: What are molecules and atoms? Can we affirm their existence? Can we measure their size or detect their action? Can we count them, or determine the number and energy of their knocks, if they are so minute?

An atom literally means that which cannot be cut. According to the atomic theory of the constitution of matter, all bodies are supposed to be made up of atoms. An atom, therefore, represents the smallest possible quantity of any elementary body, a quantity incapable of subdivision, if indeed such a conception of indivisibility is possible.¹

A molecule literally means a little mass, and is considered to be an aggregation of a certain number of atoms; in general, of atoms of different elements, but in some cases, it may be, of atoms of a like kind. Molecules are held to form the ultimate constituent particles of a compound body. The molecules of such a body cannot be divided if it is to retain its nature as a compound. They will, however, be resolved into constituent atoms, if the compound body be resolved, by some process or other, into its constituent

¹ Last year, in his inaugural address to the British Association, Lord Salisbury remarked: "What the atom of each element is, whether it is a movement, or a thing, or a vortex, or a point having inertia; whether there is any limit to its divisibility, and, if so, how that limit is imposed . . . all these questions remain surrounded by a darkness as profound as ever."

elements. So long, for instance, as water is water, its molecules each consist of two atoms of hydrogen joined to one of oxygen. But, if a volume of water be resolved, by heat or electricity, into two separate volumes of oxygen and hydrogen, each molecule of the water is thereby resolved into its constituent atoms. All the atoms of oxygen go together to make up the total volume of oxygen, and all those of hydrogen to form the total volume of hydrogen, obtained from the given volume of water. So also in other similar cases.

There must be a certain maximum limit of size for the molecules in any compound body and for the atoms which compose them. If we could take a drop of water and divide it into two equal parts, and repeat the process with each half, again and again, a time would come when we should at last be forced to divide a molecule, and break it up into its atoms. Those atoms would be oxygen or hydrogen, but they would no longer be water. Sooner or later, according to what the size of a molecule may be, this would occur, otherwise water would not be the compound that it is.

The hypothesis that all bodies are made up of ultimate atoms, and that, in each compound body, a certain regular number of the atoms of its components are combined into molecules, is accepted, because it explains so many of the simpler and of the most complicated phenomena of chemistry and of other kindred sciences. Nevertheless molecules or atoms are believed to be of a diameter from two hundred and fifty to five hundred times too small for the most powerful microscope to reveal them.

To attempt to measure, in any way, the size of particles so minute might almost seem to be hopeless. The measurement has nevertheless been made, not perhaps very accurately, but with a remarkable amount of success, compared with the difficulty of the problem. For instance, a soap bubble has been formed, in which the film was proved to have a thickness less than

$\frac{1}{2000000}$ of an inch. Pure water would not have held together to form such a bubble. But the admixture of a small proportion of soap gave it the requisite tenacity. Hence it was concluded, that, in any little cube of water, measuring less than $\frac{1}{2000000}$ of an inch in the length of its side, there was at least one molecule of soap occupying only a small part of that little volume. How minute, therefore, a molecule of soap must be! It has, in fact, been calculated that, in such a case, it would be less than $\frac{1}{12000000}$ of an inch in diameter.

If, however, further experiments are performed, determining the tension overcome and the heat produced in expanding such a bubble (which tension and heat depend upon the number of molecules in the thickness of its film), a diameter is indicated for the molecules of water decidedly, but not greatly, less than $\frac{1}{10000000}$ of an inch. This very minute, although finite, divisibility of matter has been in some degree confirmed by the sense of taste, or color, or smell, in cases of extreme dilution; and very decisively by the spectroscopic analysis of the light of a flame, when there has been a quantity of sodium, or of other substances, vaporized in it so small that it would take several million times as much to weigh a single grain.

It has also been shown by Lord Kelvin that a certain amount of electrical action, involving the generation of heat, occurs when zinc and copper are brought into contact, which heat would be greater the more numerous the atoms in any given quantity of the metals. And, from the observed amount of heat produced when zinc and copper are used to form that alloy which we term brass, he has concluded¹ that the constituent atoms of copper, or zinc, cannot be much, if at all, less than $\frac{1}{20000000}$ of an inch in diameter, but that they may be considerably larger. This gives an approximation to a minimum value for the size of an atom.

¹ Popular Lectures and Addresses, vol. i., p. 173.

Careful calculations as to the effect of the molecules of a prism, in dispersing into a lengthened spectrum the variously colored component undulations of a ray of white light passed through it, further confirm the above statements.

It may be assumed from these, as well as from other lines of investigation, that the diameter of the ultimate molecules, or atoms, of bodies very probably lies somewhere between $\frac{1}{1000000}$ of an inch and $\frac{1}{200000000}$ of an inch. They cannot well be much larger, or much smaller. And if it be said that there is a considerable difference between these two sizes, the answer is that it matters little whether we can state a certain limit, or one a hundred times smaller, in comparison with the achievement of having determined such limits at all. The actual range of possible size, just stated, is almost as nothing compared with that which might have seemed to be probable.

But there remains still to be mentioned one more instance of molecular action which has been investigated with even greater fulness. It is one which is intimately connected with recent astronomy, and one which brings us into the closest relation to those knocks of which we have already made mention.

It is the kinetic, *i.e.*, the movement, theory of gases, involving the distinction between the solid, liquid, and gaseous states of matter. In the solid state of matter, the atoms, or molecules, cannot be moved about amongst one another without the expenditure of considerable force to overcome the cohesion which holds them together. In the liquid state, while they still resist being torn apart, they are so far in a less restrained condition that they can be easily moved round one another. In the gaseous state they are quite free from cohesion, and are believed to be flying about in all directions with immense velocity, constantly knocking against each other, or against any surface within which a gas is contained.

Upon this supposition all the phenomena of gases can be explained. Heat expands a gas in making the molecules move more violently. Pressure heats a gas by affording additional energy to them. Expansion cools a gas when the molecules use up their energy in expanding it. A gas presses upon any containing surface by means of the knocks of its molecules. If a skin filled with gas be placed under the cover of an air-pump, and the surrounding air be exhausted, then the gas within the skin will swell it out. Why so? Because of the energy of the knocks of the molecules of the gas inside. Those molecules are constantly flying about and hitting the inner surface of the skin, but their knocks are not now counterbalanced (as they were before the air-pump was worked) by the knocks of the air-molecules outside. Once more, if a gas be compressed, then (apart from any alteration in its temperature) it is found that every time the space occupied by it is halved its pressure upon the containing surface is doubled. Why so? Because the same number of molecules are in one half of the previous space, and therefore their knocks upon any part of the bounding surface are twice as frequent as before.

All this confirms the theory of the incessant movement of the molecules of gases; while those molecules must be within the limits of size already stated. But it may next be asked: At what speed, or speeds, do their movements take place within the volume of any mass of gas? Can their velocities be determined? Yes! So far as regards their average speed in any given gas. That average speed must be such as will enable the molecules of a given volume of gas to produce by their knocks the pressure actually experienced by the surface which contains the gas. It is also possible, by observing the rate at which two volumes of gas, allowed to intermingle, are diffused into one another, to determine how far the molecules of any given gas move between their successive knocks against each other.

We cannot describe such investigations more fully here. Let it suffice to say that they indicate that the molecules or atoms of each individual gas have their own special average rate of motion. To those of hydrogen, for example, which, owing to its light density, move with especial rapidity, a speed is assigned of about six thousand feet per second, or seventy miles per minute, at the zero temperature of the centigrade thermometer — a velocity about six times as great as the average speed of a cannon ball. These gaseous molecules are so numerous that the most careful mathematical and physical calculations indicate that, under ordinary temperature and pressure, every molecule of hydrogen undergoes about eighteen thousand millions of knocks from other molecules in every successive second.

In the earth's atmosphere, the molecules of oxygen, one of its two principal components, move, upon an average, with about one-fourth of the speed of those of hydrogen, and inflict proportionally fewer knocks upon one another. Those of nitrogen, which forms its other chief component, move with a speed a little greater than those of oxygen. In the vapor of water the speed is about one-third greater than in oxygen.

We assume, then, that all gases are composed of atoms or molecules, of which there are *millions of millions of millions* in a cubic inch. These myriads of mites are ever flying about with intense velocities. Each knocks against, or encounters, its fellows, it may be five thousand millions of times, it may be twenty thousand millions of times, in a second. By the energy of these knocks heat is evolved, or pressure produced upon any surface which bounds or restrains the gas.

But what have these knocks to do with astronomy? We shall presently show their relation to the maintenance of the sun's temperature. There is, however, another interesting question connected with them, which we will now mention. It has been asked: May not the great velocities of these

molecules in the gases which form a planet's atmosphere enable them to run away from any such planet, so that either the whole of its atmosphere, or certain constituent gases belonging to it, may thus be gradually lost? The answer must depend upon the power of attraction of the planet, at a given distance from its centre, as compared with the velocity of any molecule there situated. If a particle were placed at rest at a certain distance from an attracting globe, it would begin to move towards the globe, with constantly increasing speed, until it should reach its surface. On reaching the globe its velocity would depend partly upon the mass of the attracting body. That velocity would also be greater, the farther off the point from which it started. But, however far away that point might be, mathematical calculations prove that the velocity, when the particle should reach the surface of the globe, could never exceed a certain limit of value. In the case of the sun, the earth, Mars, and the moon, those limiting velocities would be respectively about 382 miles; 7 miles; $3\frac{1}{2}$ miles; and rather less than $1\frac{1}{2}$ mile per second.

Apart from any resistance of a surrounding atmosphere, it follows that a particle projected vertically upwards (i.e., in the reverse direction) from any of the above-named surfaces, with a speed exceeding that just stated as corresponding to the globe in question, would go on and on, gradually moving more and more slowly, but never coming to a stop. It would run right away and never return.

The average velocity of the molecules, even of hydrogen (in the cold outer regions of the earth's atmosphere), being only about one mile per second, and those of oxygen and nitrogen and vapor of water from one-fourth to one-third of that value, it would at first sight seem as if there were no chance that the molecules of any one of these gases could thus decamp from the earth, since it can control a runaway velocity of nearly seven miles per second. But it must be remembered that the velocities just stated

are only *average* ones. Some of the molecules would at any time be moving much faster than others. They would all be constantly altering their speeds by mutual interchanges of velocity through the medium of their knocks.

It is probable that, at any ordinary temperature, some molecules of every gas would be moving at any moment with sufficient speed to run away from the atmosphere of any body, however great its attraction might be. But the permanence of the atmosphere of such a body would be practically secured if the proportion that might thus escape should be excessively small. And investigations in thermodynamics indicate that no knocks of molecule against molecule, no succession of interchanges of velocity between one and another of the molecules in oxygen or nitrogen or vapor of water would enable those gases to escape, either from the earth, or from Mars, through one molecule after another decamping in the course of ages. But it appears that all hydrogen may have thus departed from the earth, and, *a fortiori*, from Mars. The hypothesis also suggests that no atmosphere at all could be retained by the hundreds of little minor planets, whose power of control is very much less.

In the case of the moon it seems that the whole of an atmosphere of a composition similar to that of the earth might have been lost in this way. But it is, perhaps, more probable that the moon may never have had any appreciable atmosphere at all, owing to the earth (through its proximity and its greater attractive power) having taken into its own atmosphere any gaseous molecules from surrounding space which might otherwise have gone to the moon. There are also other ways in which the present non-existence of any appreciable atmosphere upon the moon or of any free hydrogen in the earth's atmosphere may be accounted for.

We consider that the hypothesis to which we have thus referred is interesting, but that it needs further discussion. As regards, however, its application to Mars, there are probable

indications of the presence of the vapor of water upon that planet, whether it be there because its molecules are unable to run away, or for other reasons. Those indications have been given by the spectroscope,¹ or by telescopic views of the apparent formation of clouds (such as seemed to obscure a region as large as Europe for several days last October), as well as by other effects which may be due to aqueous vapor. At any rate, we may say that the molecular knocks, of which we have been speaking, do not militate against the habitability of Mars, so far as that habitability may depend upon the existence of the vapor of water in its atmosphere.

We may, however, remark in passing that there are many reasons in favor of the supposition that Mars is more likely to have been inhabited in past ages, than at the present time, in spite of its atmosphere, or water, or clouds. Mr. Proctor, for instance, has pointed out that a globe of the size of Mars would cool rather more than two and a half times as quickly as one of the size of the earth. If the earth and Mars were in a similar condition eighteen millions of years ago, Mars would have attained (according to that rate of cooling) to the earth's present condition in seven million years, *i.e.*, eleven million years ago; and the earth would now require twenty-eight million future years in which to cool as much as Mars has cooled during the last eleven million years. So far as regards that consideration, therefore, the probability of the present habitability of Mars must be compared with the probability of the earth's being inhabited when twenty-eight million more years shall be past and gone.²

Let us next consider some greater astronomical knocks, to which we will pass on by an illustration connected with those which we have already discussed. We will suppose a small sphere of gas, perhaps an inch or two in diameter, in which the gas has been

¹ See the observations of Dr. Huggins, *Astro-physical Journal*, March, 1895, p. 208.

² Proctor's *Old and New Astronomy*, p. 542.

reduced by a Sprengel air-pump, or otherwise, to the most extreme rarefaction attainable. Its density would then be much less than one-millionth of the ordinary density of air (as in some of Mr. Crookes's experiments with the radiometer), while the number of gaseous molecules in it would be exceedingly reduced. These molecules would, however, still fly about with great velocities, but their free paths from one successive mutual knock to another would be greatly lengthened. Their knocks would at the same time be far less frequent, inasmuch as the molecules might only be a few hundreds of millions in number.

Now let us imagine this globe of gas to be allowed to expand in vacuous space until it should attain to a diameter of millions of millions of miles. If the molecules could then be much increased in size and also become of various sizes and very bright, the result might represent so much of the stellar universe as the utmost telescopic power reveals. For it is a universe in which every star is hurrying onwards, like these molecules, with its own proper motion; a motion which is, however, dwarfed in many cases almost to apparent rest by the remoteness of the stars from us. The stars are all alive with movement, ever changing their positions, their mutual relationship and influence, their configuration, their attraction upon each other. This fact vastly increases our interest in these glorious orbs. Each at the same time may have its train of attendant planets. The past and future of our own sun and its planets may have depended, and may yet depend, upon the sun's onward travel. Our health, our life, our warmth and cold, may be determined by the locality which the sun may reach in his unceasing journey of about half a million of miles per day.

These onward movements of the stars are of no small account. The telescope only shows to us that portion of any such motion which is athwart, or at right angles to, our line of sight as we look at a star. But in fifty thousand years to come, which is only as a

moment compared with the millions of years which astronomy and geology call upon us to contemplate, those partial movements would abolish the belt of Orion and bring Sirius to be directly under one of Orion's feet instead of far away to the east, while Procyon would be nearer to Orion than Sirius now is. Fifty thousand years ago the seven chief stars of the Great Bear, instead of forming a plough or wain, appeared from this cause as an elongated cross. At the same time it should be remembered that the spectroscope also shows the existence in the stars of additional movements, upon an equal scale, directly towards or from us.

And besides all the myriads of bright stars thus seen in telescope or spectroscope, there are probably many which have so far cooled as to be invisible. In certain cases (as, for instance, in the periodic occultation of the greater part of the light of Algol) we have decisive evidence of the existence of huge dark bodies, which, for aught that we know, may be very numerous, but which, by their cooling, would not in anywise have lost their onward velocities through space.

If so, it is only natural to ask whether knocks may not occasionally occur between some of these brighter or darker orbs? Possibly. But such knocks would certainly be very rare. However vigorously two bodies might draw each other together by their mutual attraction, they could not finally knock unless they had almost *exactly the same* velocity, or almost *no* velocity, in the direction perpendicular to that of the line of their mutual approach. Otherwise, their near approach could only result in their whirling once past each other in sharply curved paths (their outer parts possibly grazing), just as a comet hurries round the sun. Or it might result in their revolving round one another as the components of a double star revolve, in elliptic orbits.

But we cannot deny that more or less direct knocks might, from time to time, take place. And the occurrence of so-called new or temporary stars, which involve a tremendous and sudden de-

velopment of light and heat, may indicate that something of the kind has occasionally happened, and been seen by us. We refer to observations of outbursts of stellar light such as Tycho Brahe saw in A.D. 1572, or Kepler in 1604; or to those more recently seen in the new stars of 1848, 1866, 1876, 1885; and in the very remarkable Nova, or new star, in Auriga in 1892. In such cases there may possibly have been some terrific knock or series of knocks.

If so it must, however, be allowed that it is very difficult to account for the very rapid falling away of the light after its first outburst. The direct knock of two dark masses might certainly produce a wondrous brightness, invisible before, as the result of the conversion of the energy of their movements into heat and light. But it would not seem probable that the light of the united mass, thus rendered so brilliantly luminous, would fall in about a couple of months, as that of the new star of 1892 fell, from the fourth to the fifteenth magnitude, which means a one-hundred-thousand-fold diminution of light; or that the star of Tycho Brahe could diminish its light a thousand-fold, as it did, in little more than a year.

In 1892 it was thought that two brilliant bodies indicated their presence in the new star by a double spectrum, and that the displacement of the lines in the spectra, which were considered to be of two distinct classes, indicated that both bodies were in exceedingly rapid motion. If so, they might have so disturbed one another, even without actual contact, as to have produced very important eruptive effects. The spectroscopic observations have, however, received other interpretations. There may, perhaps, have been only a near approach of some dark orb to a bright sun, and a less rapidity of movement.

In any case, the explanation of the observations of all new stars, including that of 1892, is undoubtedly difficult. Whatever the truth may be, even if in most cases no actual knock of two great

globes has occurred, such outbursts of light, owing to the violence of the disturbance produced, must almost inevitably involve a considerable number of what may be termed greater knocks. But all the phenomena exhibited would also ultimately depend upon countless molecular knocks in the light and heat evolved.

If, however, in especially rare instances (of which, perhaps, that of Tycho Brahe's surpassingly bright star of 1572 may be one), it be allowed that an actual knock of two huge bodies, meeting more or less directly, may have taken place, such an event would be very suggestive. It would carry us in thought to an epoch in the evolution of the solar system earlier than the nebular epoch imagined by Laplace (and recently illustrated by Dr. Roberts's photograph of the nebula in Andromeda), when that system may have been a vast nebula from which the planets and the sun were subsequently cast off or condensed. It would suggest that such a nebula may have originated in the terrific knock of two great globes, the joint mass of the two being about equal to that of the sun.

We think it possible that the light evolved in such a case might be comparatively transient (as with temporary stars) if the knock were strong enough to vaporize the whole of the two masses. Certain solid portions, while still unvolatilized, might give forth a great light, but only for a short time, by their incandescence, like the particles of carbon in the flame of a gas, or candle. But subsequently the highly heated gas resulting, when the whole was vaporized, would not necessarily be very luminous; just as the very hot flame of a Bunsen gas-burner gives out little light. When, however, the greater part of the nebula should contract into a central sun, it might become much brighter again.

The great compression of its mass as it contracted would conduce to an increase of its luminosity; and it is a very interesting fact that such a gaseous mass, by the very act of contraction, would necessarily for a long time

increase its own temperature, even though that contraction should all the while result from the radiation of heat from its outer surface. Mr. J. Homer Lane, of Washington, some years ago showed that a globular mass of gas contracting by the radiation of its heat to one-half of its original diameter would double its temperature. Otherwise the eightfold increase of pressure outwards, due to the compression in volume, would only be one-half great enough to resist a sixteenfold increase of the inward pressure. We say sixteenfold because the inward pressure would be increased fourfold by the increased gravitating attraction inwards due to the lessened distance of the surface from the centre of the sphere, and fourfold more (*i.e.*, sixteenfold altogether) by the smaller surface over which that attraction would be spread.

Consequently it can be shown in the case of such a body as our own sun that, at the same time that it contracts through becoming cooler in any region where the density remains the same, it may become hotter where the density is increased through that contraction. It may rise in temperature at a given depth below its surface so as to radiate more heat to the earth, while the process of cooling from its outer surface continues.

Such an increase of effective temperature in a contracting globe is really due to the attraction of the mass of the globe upon the millions of millions of minute molecules in its gases. The sun is doubtless in the main a great globe of gas, although so intensely compressed in its central parts that they may be in a thickened or semi-viscous condition. The gravitating attraction of the sun's mass is ever tending to generate a downward velocity in the gaseous molecules, located in any part of it, towards its centre. At the same time, the radiation of heat at its surface diminishes the upward counterbalancing pressure. This allows the molecules to be actually more or less drawn inwards. Their individual average velocities are, upon the whole, increased. Their knocks against each

other become more violent, and generate an increase of temperature. And the result, previously stated, which might at first seem to be almost paradoxical, is explained, *viz.*, that the sun, as its surface radiates heat away (which so far is a cooling process), may nevertheless, through its consequent contraction, generate a higher temperature by the fiercer clashings together, or knocks, of its molecules, as they are drawn inwards. This may enable it to send forth a more intense heat and light than before.

Therefore we said just now that a gaseous nebula formed by one of the greater knocks of astronomy — the terrific knock of two great globes — after first showing a certain temporary brilliancy, and then, perhaps, becoming only faintly luminous while in a highly heated gaseous condition, might, in its subsequent slow contraction into a central sun, manifest a great increase of light and warmth. This result of an increased vigor in the knocks of the gaseous molecules would, however, only follow *so long as they should retain their freedom* to fly about and knock against each other. If such a globe of gas should begin to solidify, it would then enter upon a stage of very much slower contraction, and its supply of heat-radiation, due to the increased velocity of its molecules, would soon practically fail.

As regards the sun, it is believed that the heat evolved by such contraction as may be taking place in it at the present time keeps it very nearly at a constant temperature, and is just about enough to counterbalance its loss of heat by radiation. It has, however, been calculated that such evolution of heat by contraction cannot, in all probability, maintain the sun's temperature sufficiently to support life as at present upon the earth for much more than ten millions of years to come; nor that a similar supply can have been kept up for a period variously calculated at from ten to eighteen millions of years past. In any case, however, it is very interesting that the maintenance of the sun's temperature depends upon the

knocks of its molecules, as affected by its radiation and gravitation, during the present existence in it of a condition chiefly gaseous. Apart from these knocks the earth would almost immediately become a frozen, lifeless waste.

Of other astronomical knocks we must say but little. They doubtless abound in the head of a comet, between the meteorites which in all probability form it, or in other groups of meteorites which may be coursing through space or revolving around suns. They may from time to time occur in the case of some of the myriad satellites which form the rings of Saturn. They may give some help to the evolution of gas, or of electricity, in comet, nebula, or star. But in regard to most of the phenomena observed in all these denizens of space, and especially in connection with those of the heads and tails of comets, in the glowing splendors and fiery jets of the heads, and in the immensely rapid repulsion of the tails, we believe that the molecular knocks are by far the most important.

The knocks and vibrations of electrical action, or of light and heat radiation, are, in consequence of their numbers and their vigor, of far more moment, in spite of the minuteness of the atoms and molecules involved, than any greater knock of one meteorite against another. These lesser knocks, which evoke, in an all-pervading ether, the undulations or vibrations by which the effects of light and heat and electricity are transmitted through space to affect our eyes, our brains, and our nerves, depend upon entities which are almost indescribably minute. Yet in astronomical observations they reveal to us the most brilliant luminaries, the greatest distances, the intensest temperatures, yet known.

In that branch of astronomy which depends upon spectrum analysis there is, however, something even more wondrous. When one far-distant body after another tells us by its spectrum of what gases or substances it is made; when comet, or nebula, or star reveals its own bright or dark lines, isolated

in certain special localities in the spectrum, which localities are invariably the same for each gas or vapor to which they belong, and exactly correspond to the greater or less rapidity of the vibrations involved; why does each gas, in thus revealing its presence, produce only its own appropriate lines and rates of vibration, and no others? We cannot certainly say. It may be because the atoms or molecules of each gas, although almost indescribably minute, are capable of certain special individual vibrations of their own, and thereby impose certain vibrations, and no others, upon the ether within which they move. They may do so by their internal movements, or in some other way. Perhaps by the effect of their shapes as they move, or by a certain electrical action. Whatever the actual process may be, recent investigations indicate that the vibrations produced in the ether often form a beautiful harmonic series.

In any case, these molecular effects, thus seen in the glittering lines of the spectrum of sun or nebula, of comet or meteorite, take us one step further into the mysterious recesses of the exceedingly small. These most minute actions of the very smallest things of which we know, tell us of the constitution of the vastest, the most distant, the most glorious.

Astronomy may well claim to be the most wonderful of all sciences, not because its measures are upon a scale that seems immense to beings such as ourselves, but because, in its revelations, the very greatest and the very smallest things—distances measured by billions of miles, masses weighing quadrillions and quintillions of tons, light and heat far surpassing all that is earthly—are intermingled in intimate union with the vibrations and movements of molecules or atoms of which trillions may be found in a single cubic inch of gas. Our view of every sun, the explanation of its heat maintenance, the knowledge of its constitution, the knock of meteorite against meteorite, or even of star against star—all these in their vastness inextrica-

bly involve the knocks of molecules so small that it is difficult to believe that such minuteness can be real.

From The Contemporary Review.
..IN THE NEW ZEALAND ALPS.

MR. EDWARD A. FITZGERALD, a member of the Alpine Club, was first attracted to New Zealand by accounts of unexplored peaks and glaciers of the Mount Cook group in the South Island. He went out in the autumn of 1894, accompanied by the excellent Swiss guide Mathias Zurbriggen, of Metchuana—famous for his ascent with Eckenstein of the Dent Blanche by its face, and for his mountain work in the Himalayas when he went with Sir W. Martin Conway in 1892. On arriving in New Zealand, Mr. FitzGerald found that Mount Cook had already been ascended by the enterprise of several members of the Alpine Club of the country. So, as his object was to ascend virgin peaks only, he thought it unnecessary to attempt this mountain. After his return to Christchurch, his guide ascended it alone from motives of curiosity. The record of Mr. FitzGerald's achievement in New Zealand introduces us to five new peaks—namely, Sealy, Silberhorn, Tasman, Haidinger, and, chief of all, Sefton—the Matterhorn of the range—an apparently inaccessible peak of crumbling rock and sheer precipice. From this new point of outlook Mr. FitzGerald perceived what led to his discovery of the pass which has now received his name, and across which the range has for the first time been traversed to the West Coast. The government had been for many years anxious to discover a route which would render the gold-washing district accessible from Christchurch without the detour around the island which has hitherto been necessary. Sev-

eral parties of explorers had started with this object in connection with the Government Survey, but hitherto their persevering efforts had not met with success. In an article published by Mr. A. P. Harper (Hon. Sec. New Zealand Alpine Society) in the *Geographical Journal* for January, 1893, this failure is attributed chiefly to the difficulty of carrying sufficient provision through the bush, and to the uncertainty of the climate. The route discovered by Mr. FitzGerald includes only some twenty minutes of glacier, and might easily be rendered accessible as a bridle-path. Mr. FitzGerald's numerous photographs of these new regions are not yet available, but the following extracts from his journal will indicate the importance as well as the difficulty and danger of the service he has rendered to the colony of New Zealand and to all lovers of Alpine adventure. Mr. FitzGerald chose as his centre of operations the Hermitage, a small hotel (closed owing to bankruptcy) in the Hooker Valley, accessible in four or five days by coach from Christchurch. Here he encamped on January 5, 1895. Our first extract from his journal describes his successful ascent of Mount Sealy. The reader should bear in mind that in New Zealand the average snow-line comes down to some six thousand feet above the level of the sea, while the valleys range from two thousand to three thousand feet; thus, a mountain like Sefton, which is only 10,359 feet above the sea level, is in reality as high above the Hooker Valley as the Matterhorn is above Zermatt.

I decided to leave Mount Sefton alone for a few days, and to try the ascent of Mount Sealy. Mount Sealy has been frequently attempted by the leading members of the New Zealand Alpine Club. In 1891 Messrs. Harper and Johnson tried it from Birchhill

Creek, but were obliged to turn back before reaching Barrow's Saddle, on account of the weather, which was so thick that they could not see a few yards in front of them. Since then Messrs. Fife and Graham attempted it from the Mueller Glacier, but were driven back by the rottenness of the rocks. Mr. Fife described it as "a terror to climb!" Mr. Mannering has also tried the mountain, but weather has prevented him. Mr. Malcolm Ross, of Dunedin, attempted the climb, but unfortunately made a slight mistake as to the identity of the peak, climbing a knob on the range some six thousand feet in height. This ascent he described in a little pamphlet of his entitled "Aorangi," and published by the New Zealand government.

At five o'clock on the morning of January 24 we started, and climbing first Mount Ollivier (6,298 feet) we skirted along the Sealy range and ascended the mountain by the eastern arête. After a difficult climb over extremely rotten rocks we reached the summit at three o'clock in the afternoon. We stayed there about an hour and returned by the same route, reaching the Hermitage about 10 P.M.

The next ascent was that of Tasman and Silberhorn combined, on February 5. Mr. FitzGerald had attempted these peaks, accompanied by Messrs. Ollivier and Clark of the New Zealand Alpine Club, on January 15, on which occasion they bivouacked on the Hochstetter ridge from January 15 to 17, and reached a point within some fifteen hundred feet of the summit of the Silberhorn, whence they were driven back by the weather.

On February 5, Mr. FitzGerald made the ascent with Zurbriggen and Clark.

February 4. — Adamson came up this morning and took away all the blankets, as they belonged to the furniture of the Hermitage Hotel, which is to be sold by auction. He was also about to take away the knives and forks,

plates, and cooking utensils. He, however, took pity on our misery, and left us one tin plate, with a spoon and a fork. We now decided to go up to the bivouac on the Hochstetter ridge. Accordingly, at eleven o'clock we started out, fully equipped, and laden with three days' provisions. After many halts, we arrived at our destination at six in the evening. We found our tent and all the things we had left on the previous occasion in good order. We put up the tent, and, laying down a large piece of mackintosh sheeting I had brought up, made ourselves fairly comfortable. We arranged to start next morning at about two. The weather looked very promising, and we had every hope of a successful ascent next day.

February 5. — At about one o'clock Zurbriggen roused us up. It is a long and complicated operation to heat water with a Russian furnace that will not burn properly. First, it would flare up in huge flames, making a fearful noise, and making us fear that it would burst; then, at times, it would not burn at all; and almost invariably when the water was on the point of boiling it would go out and have to be refilled, an operation taking some five minutes. We, however, got off at last at 2.30. The weather looked very promising. We took only one rucksack with us. We now toiled up the steep, crumbly rocks by the light of the lantern. There was no moon, as on our last attempt, and we found the walking very difficult, especially as great care had to be exercised not to drop stones down on one another. We knew the route, though, by this time, and in an hour we stood on the edge of Glacier Dome, and at the foot of the great plateau. Here we stopped to put on the rope. The night seemed to me to be too warm, and the snow, at first, too bad. However, it improved just before dawn, and the weather became intensely cold. We crossed over the plateau, and, as before, made straight for the arête of the Silberhorn. We did not stop a moment to rest until we were on the first rocks of the arête,

knowing the value of time from our last experience, when, had we been a couple of hours earlier, we should have succeeded in reaching our peak. At 5.40 we stopped for breakfast at the first rocks of the arête. Zurbriggen screwed the long nails we had with us into Clark's boots, and we put on our crampons. At 6.10 we were off, zig-zagging our way up the ice névé. Our crampons here saved our cutting steps, as we had done the time before. I put Clark last on the rope, and he managed to scramble up somehow with the assistance of the rope. He was very keen to make the ascent, so I did not like to leave him behind. We soon reached the spot where we had to turn the big crevasse and seracs that we had thought on the former occasion would prove an impassable barrier to our ascent.

Here we found everything greatly changed. Some new crevasses had opened up, and some of the biggest blocks of seracs had fallen. After a little time and patience, however, we succeeded in threading our way through this, and started on the last bit of the arête of Silberhorn. This we found very steep. We passed the place where we had turned back the time before; the notch I had cut out of the ridge was still quite perceptible, although filled up with new snow. Our steps, of course, were entirely effaced. I could not help noticing that we were very much farther off here than we had thought on the day when we turned back. From this place to the summit of the Silberhorn took us an hour and ten minutes. We had to cut steps all the way. Zurbriggen made very small ones, and I hollowed them out so that they would do for Clark, who had no crampons. Also we wished to have good steps for the descent, as we had a vivid recollection of our descent the last time, when we were nearly blown off our feet. As it turned out, these large steps proved our salvation. At 10.30 we reached the peak. The wind was now blowing up so strong, and the clouds were gathering so fast in the north-west, that we held

consultation as to whether we should continue or turn back. Mount Tasman now rose above us with a very steep arête, all cut across by crevasses, and we calculated that we should have three hours' work before us. We at last decided to go on a little to the foot of the ascent. To do this we had to descend some way down the face of the Silberhorn, as we were cut off by a huge bergschrund from the arête leading straight from Silberhorn to Tasman. I was surprised to find that Silberhorn was such an independent peak—by itself, as it were. It looks from below like a mere knob on the arête of Tasman, but in reality it stands out quite by itself, and is a distinct peak, there being a marked col between it and Tasman. After going down some little way, and skirting along the west face, we reached this col, and arrived at the final arête of Tasman a little past 11 A.M.

The wind was now blowing a gale, and white, fleecy clouds encircled us on every side, so that at one minute we were in the midst of thick mist, and at another minute the sun shone through, and we could see the peak for a moment. Here we stopped again to decide whether to push on or not. It seemed a pity to turn back when we were so near our goal. We therefore resolved not to be beaten, and so, leaving everything that we had with us in a small hole that we hollowed out of the ice, we started out with the determination to reach the summit at all costs. A steep wall of ice rose up here, nearly perpendicular, where the glacier had broken away from the arête. This wall was about thirty feet high, and took us some time to manage. We now put Clark in the middle, and Zurbriggen started off working in magnificent style. The ice rattled down on our heads, cutting our faces and hands. I spent my time enlarging every step as much as possible, having the descent always in view. We were now almost totally enveloped in the mist. In about half an hour we had passed this wall, and were now upon the snow névé of the arête. We continued now for half

an hour, when suddenly the summit loomed up in a most unexpected way, not twenty yards from us. I was excessively surprised when we reached it, as I had expected a sharp, conical peak of ice or snow from the nature of the mountain. It, however, turned out to be quite a little plateau, triangular in form, and large enough to have pitched a couple of good tents upon.

As we were on the summit, the clouds cleared for a moment, and I was able to see down the arête leading to Lendenfeldt. If it were possible to get on to this arête, the last part leading to the summit would certainly be easier than our route up from the Silberhorn; but it would be difficult and perhaps dangerous to reach the arête, owing to the nature of the overhanging glaciers around. We commenced the descent almost at once; it was too cold to stop, and the wind seemed to cut right through us. As I had expected, the wind had filled up almost all our steps with fine, powdery snow. I went first, then came Clark, and Zurbriggen brought up the rear. I had to hollow out each step coming down. The nasty steep bits of the arête leading down from the Silberhorn were still before us, so we advanced as quickly as possible. The wind was blowing a terrific gale now, but fortunately we were sheltered coming down to the col, as we had cut up on the east side of the arête. When we regained the col, I took several photographs, but owing to the narrowness of the arête and the wind, and the general sense of hurry, I was not able to do much. It was now half past one, and the weather seemed to be getting worse every moment. We hurried on to the Silberhorn, and there at once began our descent.

Here the steps were cut in the crest of the arête, and we were exposed to the full blast of the nor'wester. We had to move very carefully, and if it had not been for the large steps we had hollowed out in the morning, I don't know how we should have got down. We got on all right till we reached the first crevasse on the arête. Here there is a corner of ice that has

to be turned, and a large covered crevasse to be crossed. I got to the edge, and then turning round, I made Clark come near me, so that I might jump. As I jumped, however, he unfortunately pulled the rope, landing me in the centre of the very frail bridge. I heard it crack, and I called out to Zurbriggen, who was round the corner on the south-west side of the arête and out of sight, to hold tight, and in a moment the whole thing gave way under me with a tremendous crash. I fell for about twelve feet, and some of the large blocks of ice that fell with me hit me on the head, stunning me for a moment. The rope held tight, and in a moment I regained my senses. I at once wedged myself with my back on one side and my feet on the other, and in this position I managed to cut a couple of steps, one on each side of the crevasse. I then with some difficulty got into these, and was then soon able to cut my way out. The others could not assist me at all, as they were so badly placed themselves. I then undid myself from the rope, and let the others make a detour so as to come to me. They were not able to cross where I had crossed, as the whole bridge was broken in. I sat down for a little to regain my senses; I was not really hurt, but I was considerably shaken by the fall, and my head was rather painful. However, after I had taken a mouthful of brandy I felt better, and we recommenced our descent. It was now snowing and blowing so furiously that it was all I could do to find our tracks of the morning, and frequently we had to wander about quite a little time before finding them. At half past four we reached the last rocks of the arête, and commenced our descent into the great snow plateau. Here I sent Zurbriggen on ahead. The weather was now lifting slightly, and we had no trouble in crossing the plateau; the snow, however, was very soft, and we had a good deal of difficulty with some of the crevasses. We soon reached Glacier Dome, and scrambled down the rocks. We had one very narrow escape here from a

stone rolled down by Clark. We arrived about 6.30 at our tent bivouac, and were delighted to find that it was quite dry and uninjured by the wind. The time occupied by the ascent and descent was sixteen hours, out of which we had fourteen and a half on the rope. We were much fatigued, as the whole day had been almost incessant work at step-cutting.

On February 8 Haidinger was successfully ascended.

February 6.—This morning I decided to send Clark and Zurbriggen down to the Ball hut for some more provisions. I told them to come up on the following day, as there were sufficient provisions for me in camp till then. They left at ten in the morning. I spent the day in drying our effects, and generally arranging and mending the tent, which was in a most dilapidated condition. As night came on the weather turned bad again; and at nine o'clock in the evening I had to go out and tie an extra rope to the tent poles, fearing that the whole thing, with myself inside, would be blown down the couloir leading to the Hochstetter Glacier. I sat up most of the night, holding on to the tent-pole, when an unusually hard gust seemed to nearly blow the whole thing over. The sides of the tent flapped in the wind, and made a most tremendous noise.

February 7.—Early in the morning a stone avalanche came down the couloir near the tent, but luckily none of the stones hit it. At sunrise the weather cleared, and the wind changed, and blew gently from the south-west. In the afternoon Zurbriggen arrived; he had been rather anxious on my account that night at the Ball hut, as he said that the wind blew so hard that he even feared the roof would be torn off the hut. Clark arrived a little later. We now had provisions for several days, so I determined to try Haidinger next. Zurbriggen went out to see if we could go straight across the head of the Freshfield Glacier, and thus reach

the arête leading to Mount Haidinger from the col between it and Mount Haast. He arrived late in the evening, saying that it was impossible, as there were enormous crevasses cutting us off. We therefore decided that we would go up the Glacier Dome, then, skirting along the plateau under the arête of Haast, finally strike that arête, and thus continue to Haast; then, if there was time, go on to Haidinger. So we determined to make an early start.

February 8.—About half past twelve Zurbriggen woke us up; we did our best to make an early start of it, but everything seemed to block our progress, and it was not till a quarter past two that we managed to leave our bivouac. In an hour we were on the last rocks of the Hochstetter ridge. The morning was intensely cold, and the snow in excellent condition. We now turned off to the right, and travelled along the snow plateau for about half an hour. Then we tried to turn up the second couloir from the Hochstetter rock that leads on to the arête going up to Haast. Here we found ourselves cut off by an immense bergschrund, so we had to retrace our steps, and take the arête from the very beginning. Here we were some time crossing a large crevasse by lantern light. Once on the arête we found that the rocks were in a most fearfully rotten condition; the slightest touch would at times bring down masses of stone, and we had to be very careful lest these stones in falling should strike either one of us or the rope. At six o'clock we stopped for a bit of breakfast; the sun had now risen, and the day looked promising.

Haidinger appeared most hopelessly far off from here. I took some photographs of it, and also of Haast from this point. In half an hour we were off again. We went as fast as the rotten condition of the rocks would permit. After we had gone a good way up the Haast arête, we thought we might cut across the face of the mountain, and get on to the head of the Freshfield Glacier, and so to the col we

wished to reach. We accordingly set out to accomplish this traverse, but soon found that we had got ourselves on to a very dangerous place; stones came whizzing by every moment, and we had to run as fast as we could, although the incline was difficult. At last we reached a rib, where we could rest in safety for a few moments. From here we saw that we had to cross the glacier at a point where it was strewn with avalanche *débris*. Above, some large seracs, just at the col, seemed to threaten to sweep our path. We now began to discuss what we had best do. It was evident that we could reach the Haidinger arête in a short time from there, but then the mountain itself looked so far off. At last we determined to try it, so we started out, and crossed the head of the glacier as quickly as we could. By about eight o'clock we had passed the dangerous part, and now had to go up a steep slope on to the col. There was a large bergschrund here that rose up with its further lip some ten feet or more above the lower. Here I got on to Zurbriggen's shoulders, and Clark steadied me; then I planted my ice-axe into the snow, and Zurbriggen, putting his ice-axe under my feet, managed to shove me up. This was accomplished after some failures and some rather unpleasant falls. Once I had reached the upper lip, I cut a large step for myself, and planting my ice-axe well into the snow, I pulled Clark up; then both of us together managed to haul Zurbriggen up. We now continued towards the arête, and in a few minutes we were on it.

Here a most magnificent view opened out before us. All the West Coast, with its green valleys and lagoons lay at our feet; the sea beyond was enveloped in a mass of clouds lying quite low, giving the appearance of a vast desert of sand; the sun was beating down fiercely, and we suffered a good deal from the heat. Right at our feet lay the great névé of the Fox Glacier. We now commenced the ascent along the arête; the walking was not bad, and we found that we progressed faster

than we thought. Almost all of it was snow, except one small bit of rock halfway between the col and the summit of Haidinger. Just as we were approaching the peak, about a hundred feet below the top, we struck a patch of blue ice. We turned, and bearing away to the left, we gained some rocks. Here a huge boulder was detached by one of us, and it was one of the largest blocks I have ever seen fall; it went down in tremendous bounds till it reached the Fox Glacier; jumping the bergschrund, it shot right on to the glacier, and remained standing there alone, far away from any other rocks that had fallen. At 10.20 we reached the summit. The day was a perfect one; not a breath of wind stirred. After we had partaken of some refreshment, and had drunk a bottle of claret (Zurbriggen always insisted on taking a bottle of wine up these peaks, as he said it was so useful to leave as a record of the ascent), we laid ourselves down and slept for about a couple of hours.

I have never seen such magnificent weather upon any peak. I noticed that almost all the rocks on the summit had been fused by lightning; they were all cracked and covered with little bubbles, and blackened over these. I took many photographs from the summit, while Zurbriggen smoked his regulation cigar. At ordinary times he smoked a pipe, but when on the summit of a peak he says he always does honor to it by smoking a cigar. At one we commenced our descent. We came down without incident worthy of record to where we had left our knapsack, just after crossing the worst part of the Freshfield Glacier in the morning. It was then about half past two, and I stopped to take some photographs of these overhanging seracs. We then crossed over without accident to the arête of Haast. We found the rocks still looser now that the sun had thawed out all the ice that had bound them in the morning. We had several slight accidents, and some nasty cuts. At half past six we regained our bivouac, thoroughly wearied from the day's

work. We found the ground unusually hard to sleep on that night.

From the time of his arrival Mount Sefton had been the object of Mr. FitzGerald's ambition. His first attempt was made on January 11, in the company of Messrs. Ollivier, Mannering, and Adamson, but the weather proved hopeless. On January 22 he started alone with Zurbriggen, arranging with Mr. Barrow to signal to them from the Hermitage in case the barometer should fall. So violent a wind, however, rose that they turned back—only to discover too late that the day proved fine! On each occasion they passed the night in a bivouac just below the snow-line. On January 25 and 29 and on February 12 similar attempts were made by them with no better results. On February 13 they again reached the bivouac, and on the 14th the ascent was made at last.

February 13. — At about eight o'clock we reached the bivouac, and made ourselves comfortable for the night. This time we had the sleeping-bags that Clark had brought up before. The moon rose soon after we arrived and gave most magnificent light, so at about midnight we decided to start. Zurbriggen lit a fire and made some tea; we took some provisions, and I took my camera, and we divided our loads into two rucksacks. We put on our crampons and roped ourselves together at the bivouac, as we knew there was some steep ice just at the start.

February 14. — At 12.45 we were off. We climbed up towards the Footstool for about an hour on the glacier, winding our way between huge crevasses which had opened out in every direction since our last attempt. After we reached the last rocks we started out to cross the plateau towards Sefton. Here we found the glacier in a terrible condition; some of the ice bridges were very thin and treacherous; however, as it was extremely cold we man-

aged to get over them safely. We had to wind in and out amongst these seracs to get through, and although the moon gave us a great deal of light we found it very difficult work. Part of the glacier hung above us in an ominous fashion, and as we passed over the *débris* of former ice avalanches, we kept looking up anxiously lest some of the pinnacles that appeared as if they were tottering above us should fall. After a time we came to an enormous crevasse about a couple of hundred feet in width, which ran the whole width of the glacier and blocked us completely. This it was impossible to pass, as it was very deep, and both sides of it were vertical. We had therefore to skirt along the edge of it until we reached the rock ridge which rises out of the Huddleston glacier, and leads to the col between Sefton and the Footstool. Here we had to get down into a crevasse to get to the rocks, as the glacier had broken away to such an extent that there was a great deal of space between it and the rocks. We now found that we were in the path of falling stones. We therefore gained the rocks as quickly as possible, and began scrambling on to the arête. We found the rocks extremely loose and in a most dangerous condition. I have never seen anything like the way in which they seemed to be balanced one on top of another, as if by the hand of man; sometimes the slightest touch would bring down tons of stone. We had to be very careful, especially in the rather uncertain light. The rope every once in a while would catch against some stone and bring down whole avalanches of stone. At about a quarter past five we reached the last rocks of this arête. There now extended before us a long snow ridge, extremely steep, leading to the col. We began cutting steps up this, as we found that it was hard ice, and that our crampons were not sufficiently sharp to hold safely to it. They were, however, of great assistance to us, as the steps we cut were very small; in fact, had we not had them, we should have lost fully three hours here.

The dawn now began to break, and a cold wind sprang up with it from the south-west. At half past six we stood on the saddle between Sefton and the Footstool. The view here is magnificent. We could see all down the wooded valley of the Copeland leading to the Karangarua River and the West Coast. We could see far out to sea, covered with light, filmy clouds. Mount Cook looked most imposing from here, its ice-cap being just tinged with the rising sun. Below us lay the Hooker Valley, still in the dark shadow, and we wondered if our friends at the Hermitage could see us. As we found out afterwards, our progress up to the col had been watched by them from daybreak. They had seen us cutting steps, and could even distinguish the rope through the telescope which I had left with them. On the Copeland side of Sefton there is a tremendous precipice going down quite perpendicularly from the col to a glacier very far below. This precipice must be fully five thousand feet sheer drop; the rock arête that leads to the summit of Sefton looked absolutely impossible. In places it seemed more than perpendicular, and in many places it was swept by falling stones.

We stopped here for a moment to eat a box of sardines and a few biscuits; this being the first halt we had made since leaving the bivouac. We determined to leave everything here. I did not take my photographic camera, as it would have hindered me too much, climbing on the rocks. We expected to find our work cut out for us from here, and we certainly did. At seven we were off, in the lightest marching order. We were roped with about thirty feet of Alpine Club rope, and carried besides one hundred and fifty feet of Buckingham's thin cord, tested to bear four hundredweight strain, and a couple of long iron staples with a ring at one end of them to drive into the rocks coming down, should we have any very difficult *mauvais pas*. Zurbriggen insisted upon taking a bottle of claret. He said we must have something to leave on the sum-

mit. I assured him that it would get broken, but I slipped it into my pocket. The first bit of rock that we tried was about as rotten as anything I have ever seen. The minute we set foot upon it, it began crumbling away. The arête here is very thin, like a knife-edge, and it actually leans over on the Copeland side. Every time Zurbriggen stepped, and the stones crumbled down, I could feel the whole thing trembling. We were intensely relieved to get off this and to get on to the solid part of the mountain, if any of it can be called solid. Now, instead of small crumbling stones, we had large boulders, prepared to give way at the slightest touch. The side we started to climb was almost perpendicular; the greatest care had to be exercised, especially on Zurbriggen's part, as I was necessarily vertically below him almost the whole time, and a small stone falling from his feet might have injured me very badly. It was certainly wonderful how he managed, and I have never seen a finer display of mountain-craft and rock-climbing than on this day.

In about an hour of this work, we reached a place where it was not quite so steep, and we could advance a little quicker. In front of us rose what we had always thought to be the worst part, looking at it from the Hermitage. Looking at it from where we were now, it seemed worse if anything. The rock was slightly better, but, on the other hand, the loose pieces were so much larger, that we had to redouble our care. Zurbriggen now crossed over on to the Copeland side of this bit; it was just about perpendicular here for about three hundred feet, and we were almost on the crest of the arête, with some six thousand feet almost sheer drop below us, both on the Copeland and the Mueller side. There seemed some peculiarly insecure rocks here; sometimes we had to throw them down purposely. We moved here one at a time, with the utmost precaution. I carried the two ice-axes in my hand; I found these considerably in my way in climbing.

All of a sudden, as I was coming up one place, a large boulder that I touched with my right hand gave way with a great crash, falling on my chest. Zurbriggen was just about to take the ice-axes from me. I had them in my left hand and was handing them to him; the slack rope between us lay coiled at his feet; the stone as it fell hurled me down head first. I fell for about eight feet, when I felt the rope jerk, and I struck against the side of the mountain with great force. I was afraid lest I should be stunned, and drop the two ice-axes in my hand, for I knew that on these our lives depended; we should never have succeeded in getting down the glacier through all the seracs without them. After the rope had jerked me up, I felt it slip and give way, and I came down slowly for a couple of yards. I thought Zurbriggen was being wrenched from his position, and I was just considering how it would feel dashing down the six thousand feet below us, and how many times we should strike the rocks on our way down. I saw the rock that I had dislodged going down in big bounds; as far as I remember, it struck the side three times, and then took an enormous plunge of about two thousand feet, and landed in a crevasse in a glacier which has now been named the Tuckett Glacier. Then I felt the rope stop, and pull me up short. I called out to Zurbriggen, and asked him if he were solidly placed—I was swinging like a pendulum with my back to the mountain, scarcely touching the rock face. I should have required to make a great effort to turn round and grasp the rocks, and I was afraid that the strain which would necessarily be placed on the rope from this effort would dislodge Zurbriggen. He thought that I had been half killed, as he saw the rock fall almost on top of me. As a matter of fact, it struck my chest and glanced off to the right under my right arm, thus saving me. His first words were, "Are you very much hurt?" I answered, "No," and again I asked him was he firmly placed? "No," he said, "I am very

badly situated here. Turn as soon as you can, as I cannot hold on much longer." I gave a kick at the rocks with one foot and managed to swing myself round. Luckily there was a ledge near me, and I was able to get some handhold almost at once. I then scrambled up a little way and passed the ice-axes to Zurbriggen. I held on to these during the whole manœuvre. We were in too bad a place to stop or to speak to one another, so Zurbriggen climbed up a little further and got himself into a firm position; then I scrambled up after him, and in about ten minutes we had passed this steep bit.

Here we sat a moment and took a mouthful of brandy to recover ourselves, for our nerves had been badly shaken by what had been so nearly a fatal accident. At the time we did not think so much of it, as we had to keep our nerve and take immediate action; but when it was all over, we felt the effects of it, and we both sat there for about half an hour before we could move again. I was considerably hurt by the stone; it made a cut in my side which did not heal for a couple of weeks, and which bled a good deal. However, we determined to go on and finish the ascent. I found that Zurbriggen, when I fell, snatched up the coil of rope at his feet. Luckily, he picked up the right piece in the coil, so that soon he was able to bring me nearly to rest, but the strain was so great upon him, and he was so badly placed, that he had to let the rope slip through his fingers to ease his position while he placed himself a little better. This operation cut all the skin off his fingers, as the rope heated, slipping through his hands, and burnt him with the friction. When he was able finally to stop me, he said that had I been unable to turn and grasp the rocks he must have been dragged from his position. He declared that in all his life he had never been so nearly killed. Two strands of the rope were cut clean through by the falling rock.

There was another very bad place a few steps higher up. This we managed to climb without incident. When

we got to the top of it we saw that it would be possible to cross the face and to get on to some rocks on the Copeland side that led straight to the summit. The face here was snow, and we had to cross this diagonally to get to the rock. The snow was in very bad condition, and there were also falling stones. As we crossed it we feared very much lest we should start an avalanche, and we were obliged to plunge our ice-axes in as deeply as possible at every step. On reaching the point where we intended to take to the rocks again, we had some difficulty in getting on to them. They were quite smooth, and went up perpendicularly for some distance. I got on to Zurbriggen's shoulders—he suggested by the way that he should have got on mine—but I preferred the other method. Then, taking his ice-axe, he shoved me up as high as he could, and here, after a good deal of stretching and wriggling, I was able to get handhold and gradually to draw myself up to a ledge. Here I made myself firm, and putting the rope round a projecting rock, Zurbriggen climbed up by it. We gained the arête from here in about twenty minutes. The last bit before reaching the peak is comparatively flat, and I walked along it without any difficulty. On the one side we looked down to the Hermitage and on the other straight down into the Copeland. As I learned afterwards, we were plainly visible against the sky-line by those who were looking at us through a telescope from the Hermitage. At 10.25 we stood upon the actual summit, which is in the form of an ice-cone. Here I planted my ice-axe—it was Mr. Mannering's ice-axe, by the way, that he had lent me. They say that they saw this from below. I tied a red rag to it, that we had brought with us for this purpose—a bit of the inside of an old mackintosh lined with red. We then went down a little on the Copeland side to get out of the cutting wind that was blowing, and we had our bottle of claret, and Zurbriggen smoked his usual cigar.

We could not help thinking of the

descent a little, and wondering how we should fare, so we were not perhaps quite so cheerful as we had been upon the other peaks. Soon we came down a little to the first rocks, above which rises the snow dome of the summit. Here we built a large stone cairn, and writing the date and our names on a piece of paper, we put it into the empty bottle, and corking it up again, placed it in a safe cleft in the rocks about four feet above the cairn. I remember now that I misdated the card, writing the 15th for the 14th. This cairn that we built is now plainly visible from the Hermitage; they saw us building it quite plainly from there.

At 11.40 we commenced our descent. I came first and Zurbriggen brought up the rear. We came down without any incident to the place where the first dip commences. Here we drove one of the iron staples firmly into the rock, then taking the thin rope and tying it round myself, I came down the whole length of it, about one hundred and fifty feet. Here I untied myself and got out of the line of descent of any stones that Zurbriggen might send down when he came. He passed the rope through the ring, and came down holding it double in his hand. When he came to the end of it, he let go one end of the rope and drew it all down after him. We repeated this operation at the next steep place, where we had had our accident coming up. This time we got down quite safely and at 2.20 we again stood on the col between Sefton and the Footstool. Here we ate a few biscuits, and after I had taken some photographs, we put on our crampons and came down the snow arête. We were now in great difficulty, for the snow that lay on the ice was all soft. I had to cut steps all the way down through this and on to the hard ice. Our crampons were of very little use, as snowballs formed themselves in them, and we had to cut them out with the points of our ice-axes. At five o'clock we at last reached the rocks. Here we took off our crampons and made haste to come down the rocks, as there was very little light left.

We came down these without incident, and gained the glacier; the sun had heated the snow during the day, and it was extremely soft, so that the ice-bridges we had come over safely in the morning now proved a serious danger and obstacle to us. We had to make innumerable detours among the seracs. During this time several avalanches thundered down uncomfortably near us. We walked as fast as we could, but just as we were about to cross the last ice-bridge, and Zurbriggen was in the act of putting his foot on it, most of it gave way with a thundering crash. I heard it falling down, striking the sides, and the sound reverberated for a long time. He had only time to leap back and to call out to me, "Draw in the rope." We retreated as fast as we could, for we were afraid that the bit we were standing on was going to slip down into the crevasse, the ice-bridge being apparently its only support, and most of that was broken. It cracked in an ominous fashion, but luckily it held us up.

It was now getting dark, and we feared that we should have to spend the night out on the glacier. We had to retrace our steps a long way, until we could find another passage. This we at last found over a very fragile and soft bridge; it, however, just held us as we crawled across. We had now passed the worst bit, and soon we gained the rocks above the bivouac. We could see Clark down at the bivouac. He had lighted a fire, and we knew that he was warning something for us; so, running down as fast as we could, we reached him at half past eight, and were soon drinking a bottle of champagne that Mr. Adamson very kindly sent up from the Hermitage. Clark also had some hot tea ready for us, which soon followed. I was bruised all over from my fall, and also from sundry stones that had struck me from time to time during the day. I remained a little while at the bivouac and rested myself. Zurbriggen said he would sleep the night there, as he was too tired to continue. I wanted, though, very much to get to the Her-

mitage if possible that night, as I feared that in the morning I should be almost too stiff to move, so at 9.15 I started down with Clark. I took a lantern with me, but I soon put this out, for it seemed to make me fall over all sorts of imaginary stones. Soon the moon rose. I fell down once, and literally went to sleep before I could get up. Clark had to come and shake me to wake me. We reached the Hermitage at one o'clock, after twenty-four hours of hard and anxious work. Adamson got up and made me some soup, as we had gone the whole day on half a tin of sardines and three biscuits. He then told me how they had plainly seen me on the summit, and in fact seen us climbing the whole way.

On February 24th Mr. FitzGerald started with Zurbriggen for the Pass to the West Coast.

February 24. — At five o'clock in the morning we started out to cross into the Copeland, and so down to the West Coast. I took with me my camera and two extra rolls of the Eastman Company's films, each capable of taking fifty photographs. We took two of Silver's self-cooking tins, and a small box of fruit-biscuits; we also took the regulation bottle of wine. We took a small piece of mackintosh sheeting to sleep under, and a small tin bottle to carry water in, which we could use also to boil water. We went straight up the Hooker Valley by the Ball Pass path; here we had left a knapsack the time before when we went up the Hooker Valley, with some dry things in it. We took this sack and cut straight across the glacier. The mists and clouds, that up till now had been banked in the valley, cleared as the sun rose, and we soon had a most magnificent view of Cook. We went up a torrent bed straight under the saddle we were making for; the walking soon began to be very rough. At the head of this torrent we found a long couloir partly filled with old avalanche snow. Here we took to the rocks on the left, but as they were very bad and crumbly,

we cut across the couloir and scrambled on to the ridge to the right. If we had gone on and taken the next route but one, we should have had no difficulty in getting up, but it would have been slightly longer; we preferred the shorter but more difficult route. When we got to the top of this rib we found a small snow dome; from here we could plainly see our col not far off. We sat down here to rest for a little, and several "keas"¹ came around us. Zurbriggen tried to catch these; they came very near him, but he was not quite able to do it. They seemed chiefly interested in a nickel-plated drinking-cup I had laid down on the rocks a few feet from me. They came up to it, examined it, pecked at it, and finally flew away all together to a neighboring rock, where they seemed to hold a consultation. Then they commenced to make a tremendous noise. We threw stones at them, but they would not go away. Then they seemed to decide to have another look, for they all came back in a body together, and renewed their investigations. At eleven o'clock we left here, and continued up across the glacier till we reached the col. We put on the rope for this bit; it took us twenty-five minutes in all.

We now stood upon the divide between the West Coast and the MacKenzie country. The route we had come by was rather rough, but future tourists could, as I have said, come very easily by taking the second rib; in fact, a mule-track could be built from the Hermitage to within about twenty-five minutes of the Saddle. This last twenty-five minutes lies over a very easy glacier, and horses no doubt could be easily got to cross it. The pass closely resembles, in fact, that of the Monte Moro in Switzerland, leading from Macugnaga to Mattmark. Over this pass there is a similar piece of glacier, but they take horses across it during the summer season, and even, I believe, in winter they have succeeded in crossing it with horses. We

stayed some time upon this saddle, which I understand has been named FitzGerald. I took many photographs from here. On the Copeland side there was a slope of loose stones, not at all steep, leading into the Marchant Valley, so that the route on the West Coast side could be made without touching snow. A track here could be built with the greatest ease, as the slopes are very gradual. We drank a bottle of wine that we had with us, and I found out that this was Zurbriggen's birthday, as well as his festa or patron saint's day.

Clouds now began to gather again, and we began to fear that bad weather would overtake us. At about four o'clock we had reached the Marchant River, that flows out of the Marchant Glacier. Soon the clouds up the Marchant Glacier seemed to break away, and suddenly, as if a veil had been lifted, the twin peaks of Stokes rose up, some eight thousand feet above us. It was a magnificent sight, these two peaks, showing up suddenly through the mist, as if set in a frame. The clouds seemed to hesitate for a moment; then, as if by magic, they rolled back, and closing up again, the peaks disappeared. The whole thing did not last over about twenty seconds. We waited for another such view, but the clouds got thicker and thicker, so we started down the river-bed, determined to make as much of the remaining daylight as we could. For a little we stuck to the river-bed, the walking in which was very rough; some huge boulders soon blocked our way, and we had to take to the scrub on the left. This we found to be very dense. At first we tried to creep under it, but, finding this impossible, we next tried to crawl over it. This we found was also impossible. The only thing was to fight one's way slowly on. We went on in this way, tearing our clothes and our hands and faces, till, at the end of an hour's hard work, we saw that we had progressed one hundred and fifty feet. This would never do if we wished to get down the valley before starving, so we had recourse to the

¹ Red and green parrots.

river-bed again. Here, by some difficult climbing, we managed to get over the boulders; it was slow work, and extremely fatiguing. At 6.30 we decided to bivouac for the night near a big stone close to the river-bed. We lit a fire here, and made ourselves some tea, and, wrapping ourselves up in the thin mackintosh sheeting, we laid ourselves down to sleep on the place that we had lit the fire on, first having cleared away the hot embers. The dew was very heavy during the night, and in the morning when we awoke we found ourselves extremely wet.

February 25. — We made a fire again, and dried ourselves as best we could. At daylight we were off, and again the fearful business of climbing over these big boulders recommenced. Sometimes we would crawl through small holes, and thus get under the rocks, and sometimes through large caves; sometimes we would have to take to the bush for a few feet to circumvent some large rock; we found our rucksacks very much in the way here. At times when we tried to crawl through a hole, the sack, suddenly catching one in the back, would throw one forward; sometimes one of us would stick so fast in some hole that the other had to come and extricate him from it. It was dull, cloudy weather, and we feared the rain very much, as it would have made the river rise, and thus we might have had to return the way we came, for it is necessary to cross either the Copeland or the Karangarua River to get out of the valley. At about 9.30 we reached the bed of the valley, where there is a junction between the Strauchan and the Marchant streams. Here we flattered ourselves that the worst was over, but as a matter of fact it was only to begin. We had now literally to fight our way down, sometimes over and sometimes under great boulders; sometimes a small detour through the forest scrub became necessary, and over an hour was spent in going a distance of twenty or thirty yards.

At about 10.30 we halted to rest for a little, and have some tea. The sun now came out, and we were able to see

a little where we were. The whole valley was deeply wooded high up on both sides and down to the river; there was only one way to get through, and that was following the river-bed. At 11.30 we started out again. Soon the river narrowed into a kind of gorge, with huge boulders lying about. Here we had to take to the forest, and to force our way through a dense maze of scrub, lawyers, and supplejacks. The scrub was not quite as bad as it had been higher up, but one got so entangled in the creepers that sometimes it was impossible to move for several minutes. Zurbriggen at one time got completely pinned down for about ten minutes. I could not come to his rescue, as I was fighting my way through a bit of bush myself, but I could hear him giving his opinion of West Coast scrub, in a rather lengthy harangue, in five languages. At about 2 P.M. we reached the end of this gorge, where the river begins to widen out a little as it comes to the Welcome Flats. Here we rested for some time, and Zurbriggen attempted to catch some ducks that seemed for a moment to be quite tame. He could get within two yards of them, but they would then invariably fly away, mocking all his efforts. These are what are called the blue or mountain ducks, and are most excellent to eat. We would have given anything to have had one of them, as our provisions had given out the day before, and the only thing that we had was what is called Juno tobacco, a curious sort of evil-smelling black bar. It had one very good quality, and that was that after smoking a pipeful of it, one had absolutely no desire for food. I can recommend it as being much more efficacious than kola biscuits or meat lozenges.

The walking was now fairly good, and we progressed rapidly. The Welcome Flats, as they were called by the explorer Douglas, when two years previously he explored this valley as far as the junction of the Marchant and Strauchan streams, are a level bit of ground about four miles in length and about half a mile broad. The stream

here almost forms a lake, it widens out to such an extent. They were certainly well named, for never was a flat bit of ground more acceptable to the weary traveller than these were to us as we came down. At about a quarter past four we reached the end of these plains. The weather had been much too hazy for us to see very much; we had not been able to get a view of the celebrated sierra spoken of so enthusiastically by Mr. Douglas in his report, published by the government, of Copeland Valley. At about five we recommenced our former work, forcing our way down between great boulders in the river-bed, or tearing our way through the scrub. Some of the rocks here were quite the largest I have ever seen; one a little further down proved on measurement to be three hundred feet by two hundred feet by one hundred and ten, and some others seemed to me to be even larger. At 6.30 we stopped, and prepared to bivouac among some great boulders. The weather was looking very promising, so we did not think it necessary to protect ourselves from possible rain. No sooner had we lit our fire and made ourselves comfortable than it began to rain. This is one of the typical instances of the pleasant climate of the West Coast. I have come to the conclusion that the more promising the weather looks, the more likely it is to rain. The inverse of this problem I believe holds equally good.

February 26.—The rain fell lightly during the night, but as morning began to dawn we had to shelter ourselves in a hole, as it came down in torrents. We waited a little, hoping that it would clear. We were very hungry by this time, not having eaten since the 24th, and again we had to have recourse to Juno. I find it unpleasant the first thing in the morning for breakfast, but its magic effect still worked, and all sense of hunger left me, though I distinctly felt unwell after it. At 6.30 we started, thinking that if we were not quick in getting down we should be unable to ford the river, as we knew we must before we reached the Karan-

garua. The work was now most unpleasant, and besides, it was dangerous, as it was almost impossible to keep our feet upon the slippery, wet, water-worn stones, and beneath us the torrent rushed with great force. If we had once fallen in we must surely have been drowned. Also, when we had to force a passage through the bush, we got so wet, and our clothes got so heavy in consequence, that we had to stop and wring the water out of them. The river now runs through a gorge, and we had to keep in the woods all the time. The underbrush here was not quite so thick, and we were able to make better time. Towards about ten o'clock the rain ceased, and the sun came out. We stopped for a little to dry our clothes, and lying down upon a flat rock, forgot our miseries for a time in sleep.

We were now distinctly feeling the effects of want of food, and we got exhausted much quicker than on the previous day. We started off again soon, determined to try and make a push for Scott's homestead that evening. At about two in the afternoon we came to the end of the gorge. Here we could walk comfortably, relatively speaking, on the river-bank. We soon passed Architect Creek, and came into more open country. We saw here numerous tracks of wild cattle. We now began to look out for a good ford, as the river was high, and we thought the sooner we could cross it the better. All the places thus far, however, had seemed hopeless. At about five we got to the place Douglas had marked in his map as Harvest Ford. It looked very bad here, but I determined to try it, as it was our only chance of getting to Scott's house that night. Zurbriggen was for waiting till the morning, for he said the water would go down, as it was a glacier-fed stream, but the weather looked very threatening, and I feared lest a heavy storm of rain might make it impossible for days. We took out the long, thin rope, and I tied myself to one end of it, and started in. I went a few feet, but suddenly I fell into a hole; Zurbriggen drew me back

quickly, and I came out more like a drowned rat than anything I can think of. The water was very cold. We then consulted as to what we had best do. Zurbriggen was very much against crossing; he does not like the water at all. After a few minutes, however, when I had recovered my breath, I thought I would try again a little higher up. We went through the same manœuvre, only this time with more success. I got across the worst part of it successfully, and into shallow water on the other side. Zurbriggen, however, did not seem inclined to come, so I crossed back again to him, and tying the rope round him and making a loop in it that he could hold with one hand, I made him enter the water, while I went a little above him up stream, to give him confidence. In this way we got across successfully. The whole passage was about a hundred yards, and the river-bed was very bad, being full of holes in the most unexpected places. On getting to *terra firma*, we sat down and wrung our clothes out as best we could.

It was getting late now, so we thought it best to hurry on as fast as we could. The walking was fairly easy, and we were able to make good time. Soon we passed the junction of the Copeland and Karangarua Rivers. Here we were astonished at seeing a footprint in the sand; we could not imagine whose it could possibly be, or what object any one had in coming up this desolate valley. Soon we reached a track cut through the forest; this was still more surprising to us. As it looked in our direction, we followed it, thinking to strike what was marked in my map, published by the Geographical Society of London, as the South Road. I did not know at that time that this road existed only in the prolific imagination of certain surveyors and mapmakers. The road, I believe, was marked out, but never made. It was getting quite dark now, and we walked as quickly as we could, hoping to get through the forest before the night overtook us. We had not gone far before we saw looming up in front

of us a large tent with a fire burning in front of it. It was now dim twilight, and this apparition appeared so suddenly before us that we were quite startled. Then we heard the gruff voice of a man accosting us from the interior of the tent. A moment later he emerged, evidently as much surprised at the meeting as we were. He did not seem to understand where we had come from. On asking him whose camp this was, I found that it was Mr. Harper's, who had just come down from his exploration of the Twain and Karangarua Valleys. He was now apparently on his way up the Copeland Valley on the same errand that brought us over—namely, to find a passage from the West Coast to the Hermitage by some possible saddle at the head of the Marchant. Harper himself was at Scott's house, this man told me, and was intending to start next day. We sat down to rest ourselves a little, and we had some hot cocoa. I found out from Dick—that was Harper's man—that we were only an hour from Scott's house, but that the house was difficult to find in the dark, as there were two branches of the Karangarua River to ford, the house being situated on an island. After about half an hour's walking, we at length reached the first ford; this we found rather cold work, but, thanks to Dick's excellent guiding, we crossed without incident. The next ford was also successfully managed without accident, and we landed on the island formed by the river on which Scott's homestead stood. We had considerable difficulty in finding the house, which is hidden away in the bush, so that it can only be approached from one direction. For about an hour we wandered about, following an intricate maze of paths; there seemed to be always a path, and one followed it on, expecting to get somewhere, but unfortunately found that it gradually disappeared in the bush, and finally vanished completely, defying all our efforts to find it. At last, about nine o'clock, we found the house. Here I met Harper for the first time. We had been corresponding for a long time

previous to this, trying to arrange some place to meet; but as Harper's letters had always taken two months to reach me, and mine had never reached him at all, we had never been able to arrange upon any rendezvous. They gave us some food at once, for we were really in a starving condition. We had now been on the tramp for sixty-four hours from the Hermitage, with only about half a day's provisions.

The remainder of the journal contains an account of the difficult return journey to the Hermitage by the Fox and Franz Joseph Glaciers and the Ball Hut.

From Macmillan's Magazine.
THE LAST YEARS OF A GREAT
MONASTERY.

THE suppression of the monasteries threatens to become a question as vexed as the motives of Cromwell or the execution of Mary Queen of Scots. For the last three hundred years or so it has been past question that the morals of a monk of the sixteenth century were darker even than those of a certain person who is generally reputed to be less black than he is painted. Now it seems that we have been all wrong, and that no one was so white as a black monk. As a matter of fact we have known surprisingly little of the internal life of a religious house during the last half century of English monasticism; and much of the little that we do know rests upon evidence that can hardly be regarded as free from suspicion. No doubt it has been clear for long enough what in theory the monastic life ought to have been, and there are ample materials for forming a judgment as to what in earlier centuries it was. But the actual details of life in a religious house during its later years, in practice as distinct from theory, the domestic economy, the spending of the income, the convent fare and the like, have as a rule been veiled by the monastic historian in a discreet silence; and it is

precisely these details, as described by the monks themselves in the yearly account-rolls of the monastic officers (obedientiaries, as they were termed) of St. Swithin's Priory at Winchester, which, thanks to the enterprise of the Hampshire Record Society and the loving labors of Dean Kitchin, we are at last able to read for ourselves.¹ For to carry on the business of a religious house, and above all such a house as St. Swithin's with its eighteen or twenty thousand a year,² a relatively large number of officers was the rule, each in charge of his special department and each at the end of his official year rendering to the priory auditors a scrupulously exact account of his income and expenditure. Nine out of ten of the offices (seventeen in number at St. Swithin's) were filled by the monks themselves. At their head was the prior, presiding over and supervising the whole business of the convent.³ Next to him were his vicegerents, the second, and, when occasion required, a third and even a fourth prior. The sacristan took charge of the church, its furniture, plate, and vestments. The precentor was responsible for the conduct of the services. The warden of works kept the buildings in repair, and carried out any needful extensions or alterations. The treasurer received the larger half of the priory income and acted as its general financier. The offices of the larderer, infirmarian, guest-master, and almoner speak for themselves. The chamberlain found clothing and bedding. The cellarer paid for bread, beer, and the utensils of the house. Such at least were in theory the duties of the leading obedientiaries at St.

¹ *Computus Rolls of the Obedientiaries of Saint Swithin's Priory, Winchester, from the Winchester Cathedral Archives; transcribed and edited, with an introduction on the organization of a convent, by G. W. Kitchin, D.D. Hampshire Record Society, 1892.*

² To save the reader the trouble of constantly raising the figures to current values, they have been multiplied throughout by twelve, the factor used by Dean Kitchin.

³ Is it necessary, after Dr. Jessop's remarks on the subject, to remind the reader that the term convent is properly not less applicable to a religious house for men than to one for women?

Swithin's; and it is their annual account-rolls, or rather a remnant of them, from which we can gain for the first time a clear idea not only of the actual details of the social life, but of the whole financial administration of a great monastery, from the treasurer's debts under the convent-seal, down to the value of the kitchen-dripping and the cost of the almoner's riding-boots.

Luckily, too, owing to the survival of other documents, we are able to complete the account of the metamorphosis of the priory into the modern cathedral body; though the story of the suppression of St. Swithin's has one decided drawback: there are in it no serious scandals,—no scandals at all in one sense. And there is no tragic termination to the monastic history; no one is hanged, drawn, and quartered, and the worst of the horrors were the cartloads of gold and silver which the royal commissioners carried off from the priory church. There is no riot, not even a protest from mayor and citizens; and the practical sum total of the changes is that a number of elderly gentlemen, who left their stalls as prior and monks one evening, return to them as dean and prebendaries the next day. True, the account-rolls of St. Swithin's only apply to a single monastery; but the monastery in question was probably above the level of its contemporaries. The order to which it belonged, the Benedictines, in numbers, wealth, and influence towered head and shoulders above the other English religious communities. Whatever had been the sins and shortcomings of other monasteries, there had never been, so far as is known, any serious blemish upon the reputation of St. Swithin's. Its very position as the leading religious house in one of the leading English cities, a stone's throw from the palace of its titular head, the Bishop of Winchester,—and that bishop usually among the ablest, always one of the most powerful English ecclesiastics,—its guardianship of what was practically the cathedral church of the diocese, were of themselves some kind of guarantee that things could hardly have been

very wrong at the great Winchester priory, and its standard no unfair criterion at any rate of its own order.

What that standard was we can gather with a fair degree of accuracy from our collection of rolls, mere salvage from the wreck though they be. Luckily a large proportion of them bear decisively upon the period in question, the last half century of the priory's history. It is clear that times had changed greatly at St. Swithin's, and that they had by no means changed for the better. In the palmy days before the black death there had once been as many as sixty-four brethren in the convent. During later years the numbers had usually oscillated between thirty and forty; now there were probably, for the exact figure cannot be given, nearer thirty than two-score monks in the house in place of the ideal Benedictine total of seventy. Nor had the decline been one of numbers only. There had been a serious and permanent fall in the income, especially in the revenue from the country estates. The contributions of the faithful had dwindled to little or nothing. The pentecostals due from Surrey could not be got in at all; the receipts from the chantries were in most cases not enough to pay the expenses of service; at the high altar, even at St. Swithin's shrine itself, there were in 1536-7 no offerings whatever. In Hampshire, apparently, zeal for the old religion did not, at all events in the sixteenth century, assume a pecuniary shape. There was not indeed anything out of the common in these phenomena. They were in a great measure due to the once prevalent mania for founding a religious house, often when, as at Selborne, there was no real local reason for its existence; and accordingly many more convents of one kind and another had come into being than were required by any imaginable needs of the population. The difficulty would have been to find a house without some vacant stalls. Bankrupt monasteries, houses where the religious had dwindled to a couple of inmates, were by no means unknown. Compared with these

St. Swithin's might fairly have met its enemies in the gate.

It was small wonder indeed that the income of St. Swithin's had declined; the strange thing is that the decline had not been greater. The whole of its financial administration seems to a modern eye — one might hope to the eye of a college bursar of the sixteenth century — to have been almost planned with a view to produce insolvency. Instead of the income of the convent being treated as a whole, and apportioned year by year according to the requirements of the several departments, the various estates and sources of income had been, centuries before, parcelled out among the various officers, so many to one, so many to another, and the old method had never been abandoned. Each officer had thus his own income, and each his own expenditure. A more unfortunate arrangement could hardly have been invented. It took no account of the annual variations in expenditure which must and did affect the various offices, in especial such as that of the warden of works, who in one year might have no more than a few roof-tiles to re-fasten, in the next, restorations or extensions to the amount of three or four years' income. There was small inducement to watch his expenditure in the one case, still less hope of avoiding debt in the other. The whole character of the duties attached to an office might in the course of years completely change, but the income must remain the same. When the officer depended, as did for example the almoner, mainly on the produce of a single estate, an accident, the breach of a sea-wall or the burning of the manorial farm, might paralyze his whole department; for there was no definite method of meeting such a disaster. Then again, the income of the priory was collected by half-a-dozen different men, each with his own little bill for the expenses of collection and the supervision of the estates, and each from time to time, as the offices changed hands, hampered by ignorance of his new duties. Worst of all, it must have been difficult in

the extreme for any adequate check to be kept over the miscellaneous expenses. Such a system, or such a want of system, could hardly work well.

As a matter of fact, it worked extremely badly. To judge from the existing rolls, the obediendaries of St. Swithin's, notoriously wealthy as the house was, moved in an atmosphere of perpetual debt. As often as not the year's working ended in a loss; oftener still the balance is on the wrong side. Much of this no doubt was occasioned by unavoidable claims of hospitality, for St. Swithin's stood on the highroad to southern France; but much, one cannot help seeing, arose from sheer mismanagement. The accounts of almost every office are loaded and clogged with a list of payments mostly to the brethren, fees, stipends, courtesies (or presents of money), pittances (or extra table-expenses), compliments in the shape of wine or beer, fair-money, pocket-money, perquisites of one kind or another, which, customary as they may have been, no college auditor would dream of passing. Almost the whole of the chamberlain's income of over £1,000, which was supposed to be devoted to the clothing, bedding, and cleanliness of the monks, and which one would have ventured to regard as sufficient to keep some five-and-thirty men well clad, well bedded, and very clean indeed, was frittered away in these questionable payments. The bishop, for example, received a courtesy of £12, and the prior one of £40. The brethren have £20 each, by way of pocket-money apparently. The chamberlain's fees for himself and servants (including the "O," or annual festival of his office) amounted to over £55. Presents of wine to the prior, the cellarer, the infirmarian, the boy-bishop, the guestmaster, and the brethren on the mass lists, amount to £7 16s. These are only samples taken at random from a long list. The chamberlain must have been, one cannot help thinking, an extremely popular, as well as an extremely courteous official. But there was a serious side to the question. These illegitimate payments

absorbed, in the case of the six offices of which we have rolls in the late fifteenth or sixteenth century, a good eighteen per cent. of the united income. Nor, unless the book-keeping of the priory had improved since the fourteenth century, could the treasurer's cheerful habit of mixing up capital and income, and eking out any deficiency in the latter by the sale of some of the convent property or the grant of an annuity for cash, have tended to improve the priory's financial position.

The accounts are by no means the only unsatisfactory feature in the life of the brethren of St. Swithin's which the rolls present to us. Scandals, we have said, there were none; but it is clear that in more things than revenue had times changed at St. Swithin's since the early days when prior and monks alike took their turns at the plough or in the bakehouse. The monastery itself, from being the humble abode of poor men, had become a wealthy and powerful corporation. Its head had developed into something scarcely less than a great noble, in some cases at least possessed of large private means. He had his own official residence and income, his own household in his livery, and apparently a very definite idea of the dignity which pertained to the office of prior of St. Swithin's. We find him at one time holding his court in full state in St. Giles's Fair, at another with a train of friends and followers making a kind of progress through the monastic estates; not so engrossed in spiritual duties as to be above keeping a few couple of hounds, or turning down hares for coursing. The actual work of the house is now performed by a train of servants; the brethren are no more than the heads of their several departments. The dignity of several of them has become so weighty as to demand an official residence and household, and figures, that would have seemed strange indeed to St. Benedict, appear in the list of wages. The larderer, it seems, cannot get on without a chaplain, a clerk, a bursar, and a groom, to say nothing of a few lesser underlings.

The work of the almoner requires among other servants a sub-almoner, a butler, and an accountant, and his annual outfit of cape, tunic, and riding-boots is a serious item (£14); and yet the duties of that officer were, so far as we can ascertain, of the lightest character. The almoner indeed was a sinner against monastic simplicity in more respects than in the costliness of his apparel. His estate of Hinton, conveniently situated some eight miles east of Winchester, was, as Dean Kitchin says, a favorite place of resort for him and his friends; and their annual expenses while staying there, over and above the fare provided by the farmer (and charged against the priory), were no trivial matter. Nor was the almoner by any means alone in his periodical craving for rural pleasures.

To one familiar charge it is satisfactory to find that the brethren could plead not guilty. There was no gormandizing at St. Swithin's. The serious meals of the day were two, dinner at noon and supper between six and seven; besides this there was a bowl of porridge for breakfast, and for any who desired it a cup of ale and a hunch of bread was ready in the refectory at three when the after-dinner sleep was over. The kitchen-bills, it must be allowed, are strangely heavy; £2,100 for the year's fare, exclusive of bread, beer, and wine, to a modern mind would call for liberal reductions. But if the fare was plentiful it certainly was in no sense luxurious, even at Christmas or on the festival of St. Swithin himself; and upon fast-days there is equally plain proof in the daily bills of fare that dinner and supper were each a very sorry business. Fast-days too were disagreeably numerous before the Reformation. There was not only the long season of Lent in which to subdue the wilful appetite, but all Advent and every Wednesday, Friday, and Saturday throughout the year. At such seasons the boards must have been painfully bare, for the only admissible catables were fish, eggs, and vegetables, and upon occasion such small mercies as figs or raisins. Thus

on Wednesday, November 14th, 1492, the bill of fare for the two meals was salt ling, eggs, and an entrée of oysters. On Sundays the diet was rather more liberal, two or three extra dishes of fish being added. But happily the whole year was not made up of fast-days, and for an example of an average bill of fare we may take that of New Year's Day, 1493. Upon that occasion the brethren had for the two meals, moile (a dish of grated marrow and bread), beef and mutton, numbles (the tenderer cuts from a haunch of venison), steaks as an extra dish, and bread and beer at discretion, as our neighbors say. Sometimes instead of the moile they had brose, or toasts soaked in the dripping of the roasting meat; soup often figures as a supper dish; fish-balls, or rissoles, tansy pudding, batter, custards, calves' feet, tripe, all appear among their side-dishes. On festivals there was no more than the slightest increase in the character of the dinner; perhaps a dish of spiced vegetables and an extra entrée.

Even with these seventy-two account-rolls before one's eyes in black and white, it is difficult to understand, despite the courtesies and other payments of the kind, how some five-and-thirty monks contrived to get through so large an amount as £18,500 per annum. But one can be clear that there were certain objects upon which the income was not spent. It was not spent upon education. A couple of scholars at Oxford, a very few boys, sometimes not one, in the convent school, was all that was left of St. Swithin's zeal for learning. Nor was it spent upon the poor. It is impossible indeed to discern where at St. Swithin's the monastic poor-relief of which we hear so much comes in. One might suppose that the object of an almoner's office is to distribute alms; but one would be quite in error in attributing such duties to the almoner of St. Swithin's. Upon a few days in the year he gave away, as did the anniversarian and the prior, a good many score of loaves; he made an allowance of clothing and 3s. 6d. a week to each of the fifteen or twenty

poor nuns in the Sisters' Spital, conscientiously cutting them down to half pay when a disaster crippled his finances. The kitchener had no doubt a large amount of broken meats to dispose of; but so far as can be ascertained that was the beginning and end of the almsgiving of St. Swithin's.¹ As for the more serious problems of a great city, the world of misery and sin which lay outside the convent gates, the miasma physical and moral, the sickness and disease, the vice and crime, which haunted the purlieus of a mediæval city, there is not the slightest trace discernible in the rolls that the good men at St. Swithin's knew or cared anything about them. Still less was it their business to save souls. For such work there was the city parsons, not to speak of the friars. A pretty thing indeed to expect his reverence the vice-prior to take up with open-air preaching at the Butter Cross, or the almoner to go exposing himself to the risk of every new case of fever in Water Lane.

The impression is in fact forced upon one that there was at St. Swithin's, model house as it may have been, in more ways than one, in the expenditure, in the social life, and in the results, a good deal that must have jarred painfully on the minds of men like Fox and Gardiner; and makes it no wonder that the one devoted to other purposes the college he had designed to found at Oxford for the monks at St. Swithin's, and that the other was turned into an ardent adherent of monastic reform. It is plain that there had been serious mismanagement in the priory's resources; serious carelessness, too, as to running into debt. Its whole system was hopelessly and absurdly antiquated.

But that is not all, nor nearly all. It is not what the brethren did so much as what they failed to do, which is in fact the heaviest charge which their

¹ It is, however, only fair to point out that there are in the two treasurer's rolls of the thirteenth century a couple of entries of sums of money given by the prior, which may include alms in the modern sense.

own accounts lay against them. The priory had completely outgrown or had forgotten the purposes for which it had been founded. The world had been moving on; they had not only failed to move with it; they had not even stood still; they had positively receded. They ate and drank and enjoyed their pittances, their afternoon naps, and the services in their glorious church, and made merry at their O's and exchanged their courtesies, sublimely unconscious that a new England had come into being in which they were at best centres of stagnation. It is the intense pettiness, the moral feebleness of these courtesies and pittances in the days when, for example, the New Learning was struggling for existence; it is the utter failure of the house to play the part its founder had designed it to play in the national life, which moves one's indignation. And, as Chaucer's priest asked, "If gold rust, what shall iron do?" If this was the case at one of the intellectual centres of England, what was the state of the provincial convent, buried in the recesses of some remote county?

Probably the brethren of St. Swithin's felt something of this themselves. Certainly they had no opposition to offer to the royal scheme by which they were converted into a dean and chapter. Probably, too, the knowledge of the summary way in which the Tudor sovereigns were apt to take order with people who kicked against the pricks, was not without its effects on their deliberations. A more potent reason was the excellent terms which Bishop Gardiner had secured for them. The change was rather to be a change in name than in reality. Prior Kingsmill was to become the "first original and modern dean;" room would be found among the twelve prebendaries and twelve peticanous for such monks as cared to continue the religious life. There was no question of any change in beliefs; to some considerable extent the old common life, or as much of it as still survived, was to be kept up. There would be increased freedom certainly, and increased opportunities of

usefulness. The new chapter was to become something of a theological college; it was to maintain twelve divinity students, pension as many old soldiers, contribute liberally to the poor and to the making of highways. Pecuniarily they would all, individually as well as collectively, rather gain than lose.

There was not a murmur of resistance to the royal commissioners when they arrived at the priory in 1538. They found the prior and all the convent, they reported, very conformable. The mayor and citizens, if we are to believe the commissioners' report, were so enthusiastic in their support of the royal intentions as to attend in person and give laud and praise to God and the King's Majesty. Conformable as the convent might be, and well assured as their future was, it must have been a sore wrench to them to watch through the night these royal iconoclasts making an end of the famous shrine of St. Swithin's, in which the commissioners were disgusted to find no gold nor jewels, and in the domestic portion of the convent, owing to the foresight of the late prior, so little plate that they could not in common decency make it less. The church-plate proper, crosses and images, chalices, pectorals, candlesticks, paxes turned out better. Much of it was wrought in gold, in particular part of the high altar, which the commissioner pulled down, grumbling sorely at their trouble, after the destruction of St. Swithin's shrine, though they were careful to protest against the imputation that they did it more for the sake of the treasure than for destroying "the abomination of idolatry." Altogether the royal treasury did not do badly. In spite of its metallic deficiencies the shrine turned out to be worth some £16,000; and the total amount of treasure which passed into the royal coffers was, 1,035½ ounces of gold, 13,886 ounces of silver gilt, and three hundred ounces of silver and parcel gilt, to say nothing of certain crosses of emerald and gold which seem to have miscarried; in all considerably more in modern values than £75,000.

By the early months of 1541 all was at an end. The priory and all its possessions had been surrendered to the king; and by letters patent of March 28th, 1541, St. Swithin's, under its new title of the Church of the Holy Trinity, purged of its "idolatry" and with the great bulk of its old estates and something more re-granted to it, was free to enter upon the career of enlarged usefulness which had been marked out for it.

From The Nineteenth Century.
ORGEAS AND MIRADOU.¹

A DREAM OF PROVENCE.

ORGEAS and Miradou had lived together—together with no third—since the mother had gone from them; and that was thirteen years ago, when Miradou was five. Since then it was her father who had cared for her; the mother's name was never named between them. Had she died amongst them in her recognized place, they must from time to time have talked of her, as well as mourned. Those two hearts, made for affection—made for it so much that it was the air they breathed, the bread they fed on—must have kept of her their tenderest memory. Death, had he come to her there, could never have really separated them—could not have banished her from all their thought. Some communion still was possible. But the mother had no likeness to these two. Callous at first, and then a disgrace and a humiliation, she had gone out of their lives forever. One luminous night, between two shining days of August, she and a Piedmontese lover had tramped towards Italy—by the long mule paths (was it?) and the olive groves, and then by the bare hills.

At first, of course, to Orgeas, the disaster had seemed irreparable. Out of doors, a shame greatest of all because the lover was no Grassois and

no Frenchman, but of the hated Piedmontese—rivals in life, and, there in Grasse at least, rivals of necessity in labor. Indoors, it was a sorrow to be brooded on, and it made a dire loneliness. The foreman came home from the printing press, and none but the little child was at home to greet him.

But the child had taken her place. Months passed, and life became enduring—years, and life became sweet. Parents and children, in France, are the best of friends, generally; even when no special circumstance and no peculiar demand for affection bring them more closely together. With Orgeas there was the special circumstance and the peculiar demand. Link upon link was formed, of interest, kindness, and association. That was the visible chain. But the invisible? Well!—they were parent and child, with a mysterious and profound affinity.

As Orgeas was not wanting in imagination, for a man of his class, he recognized that if, because of his deep love of her, Miradou sufficed for him, not in a measure quite so unlimited could he suffice for Miradou. Her childish instinct for comradeship, her girlish longing for the confidence and gaiety that may exist between equals, Orgeas never restrained. She was helpful at home, in all material things, and in her recognition of his love for her altogether responsive. But there was no excuse for laying on her few young years the burden of later times. She was happy at home; and beyond home, in the great sunshine, in the sparkling southern day, Miradou, with her clear eyes and all her figure's lines, laughed herself into womanhood.

Yet if, since childhood, she had known no trouble greater than the little bafflings which give a piquancy to attained pleasure, and no exertion harder than the labor which just sweetens rest, it was not circumstances that were at the bottom of that; no outside influence—not even a father's—had brought it about; it was not produced to order. Some of her happy days she owed, of course, to the fa-

¹ The masculine termination of the feminine name is a Provençal characteristic. In Grasse, *'ve Maria!* is *Vou saludi Mario!*

vored land, and to the simple life, "cursed with no wide desires and spacious aims." How much she owed, besides, to her own nature, to her pure self and to no other, to her being that which she was — to her gay heart that under her glistening eyes danced in its joy of living! Orgeas knew that — knew that she brought to him a something, undefined, inestimable, which he had never given her. "Eighteen years!" he reflected — and he understood her well — and each year gained upon the last in bewitching merriment and the charm of an occasional and sitting gravity. Eighteen years in which she was warmth and light to him — the sight of her quickening his footsteps, her movements lifting his soul like a happy and familiar, yet ever varied air! Eighteen years, Miradou! And now she was dead.

Dead; yet not dead. No! dead she could not be. Her room indeed was empty; her father, alone. But she was not dead. She would return.

"On the ninth day," said Orgeas to himself. He said it aloud, filling himself with courage. This was the fourth day only. "On the ninth! *Elle reviendra!*"

Yet it was true that two days since they had put her in her grave in the cemetery, and on the sun-smitten road, on the descent towards Draguignan, slowly, with hat in hand, as the chief mourner, Orgeas, with blanched face and dreaming eyes, had walked, with his comrades, behind the coffin of pine. And the upturned earth in the cemetery — hurriedly, loosely replaced — was fresh to-day, unlike every other grave, that had quietly settled, with its recording words, and cross of beads, and wreath of camomile. They had buried Miradou — though it was but so lately. They had laid her down. How could she return?

If you had gone into her bedroom, in which Miradou died, if you had gone there that evening, you would have seen that though no sign of death or calamity showed in the little chamber, there was a bed unmade and sheets dis-

ordered — a pillow with the imprint of a head, and, on the open bed, the lines, as one might fancy, made by the pressure of a figure light and tall. A brush, that was Miradou's, lay on the table. There were hair-pins there, and a ribbon. On a peg, near the window, hung Miradou's red pink gown; next to it, the broad hat, low crowned, of brownish yellow straw, which had sheltered her head from the assault of the sun.

That the things were left there so, and all the place untouched, when the owner of the things, who was the room's mistress, had been three days dead, was due to a Provençal fancy — a faith to some, and by all outwardly maintained — that the hour our observation registers as that of death is not for this life after all quite surely the last. Is it the tenderness, perhaps, of a people who must owe something to classic thought, and may copy classic reticence? — the delicacy of those on whose memorials of the dead was never written the rude truth; dead they were not averred to be, but absent, journeying, called for a time to ways more distant than those their kindred had trodden — paths, nevertheless, from which return was not cut off. Absent, and on a journey; it could never even be hinted that they who had been loved here had finally gone. Yes; the Provençal adaptation of that tender classic thought, the Provençal provision for a sentiment so deep that it must not be suddenly shocked, lay in this old tradition of a few days' grace — of a humane reprieve. In some vague measure, death was sometimes a choice. If it was chosen hurriedly, might it not too be repented of?

Whatever may have been the case with the mass of his comrades, Orgeas followed in no merely formal manner the fancy of his land. He was a poet who had written no poetry. His careful common sense in daily life allowed him still to be a dreamer of high dreams. Anxious he was, but he was not thoroughly downcast. Until the ninth day, Miradou's fate was unsealed.

So much the popular belief contained

to comfort him ; and to it he added his own, born of his knowledge of her love of life, of her gay heart, and of his great yearning. Placed in the grave but three days since—placed in the grave so lightly—she was wandering now. This was the time of suspense. When it was over would she return to the life she had gladdened, or to the dark tomb she had so shortly rested in ?

For Orgeas, in his mood to-day, there could be but one answer. He paced from one to another of the rooms they had dwelt in—the little flat, high up in the cramped, dark street, far up above its shadows and its straitness—his room, her room, and the living room. Back to her room again ; the window opened wide, that her returning soul might find no obstruction. The caged bird she had tended sang in the sun, in its window-cage. Outside was the great sky, the tall cathedral tower, the bulky soap-works, the distillery chimney. Below, the olive gardens sloped in broad, grey waves towards a waveless sea. It was all as it had ever been, these many years of his joy in her. And Orgeas's face brightened with confidence—a certain hope so soon to be realized. "*Elle se promène. 'Faut attendre !* On the ninth day, at the latest—before that—before the ninth day, *bien sûr—Miradou reviendra !*"

He went each morning to his work, punctually as usual. He got himself his breakfast. A neighbor, who pitied him—but with whose pity he was scarcely concerned—tidied his rooms for him, and made his bed, leaving the chamber of the absent untouched and sacred. It was not, of course, necessary—"non, vraiment, ce n'était pas la peine,"—to think of any paid service. Soon the bright spirit of that so limited household would be again in the accustomed place. "*Bien sûr ! Elle reviendra.*"

And so the time went on.

The seventh day, he fancied his child upon her walk to Maganosc—upon the road acacias bordered, upon the great hillside, pursuing its almost level

course some half-way up the heights, between plain and mountain ridge ; winding to a ravine, and out again to a platform, a promontory, some spur of the particular hill ; yet always level, and tending slowly and with many a *détour*, towards Le Bar and the grey mountains. It was her favorite walk with her girl comrades or himself, upon a Sunday, and most of all in summer and in that Provençal spring which is a first summer and a fresher one. She must be now upon that favorite road, tree-shaded, hill-shaded, richly screened from the great westerling sun—with half Provence beneath her, its swelling lowlands, flowers, and farms, and, last, in the great distance, the abrupt rising of the jagged Esterel, for a sharp horizon.

Just past the little Octroi, the road turned suddenly inwards, made for a minute as if to pierce the hillside, then thought differently, crossed by a high bridge the deep ravine in which a stream gurgled, and then turned to the right again, where, on the gentlest slope, just close below, masses of violet plants grew under the light leaf of the olive, and by the trunks of the olive-trees stood the glazed water pots, burly as casks, holding the water with which the violet plants were from time to time moistened.¹

This year the winter had been severe for Provence, and, notwithstanding the present splendors of sunshine, flowers were backward. Jonquils and violets alone strewed the floors of the scent-makers. They must wait still for the bushels of roses, whose labyrinthine budding had not begun.

On the left-hand side of the Maganosc road there was one place that Miradou had often paused at, just before the road along the hillside made for the very depths of the ravine and then turned sharply, outwards again, towards the long village with its styleless church but quaint campanile—towards the vast olive gardens that

¹ The right to draw water from the springs at the hillside belongs to each olive-farmer for short and fixed periods. Hence the necessity of storage in those fields which are flower gardens.

sloped to the plain. There was an iron gate, high, elegant, and dignified, as of some old-world villa, and, within and behind it, a gravelled way, too broad for a footpath, yet now, by the great inroad of untended shrubs, too narrow for a carriage drive. Quickly the way curved a little — enough to prevent its further course from being seen from gate or highroad. Unrestrained foliage of darker and of lighter green — some of the trees perhaps sun-smitten and some in shadow — made of the place a tangle and a mystery. You only guessed. Above the mass of greenery there rose just here at hand, by the very roadside, the grace of the eucalyptus — a shimmer of silver — and from some unreachd recess the top of a sombre cypress lifted itself against the background of thickly clothed hillside. Had there once been a villa, there? — Miradou had wondered — was it now dismantled and done with? Or were the stately gate and the curved road and that particular garden but a secondary and now disused entrance to some greater property by the side of the hills? Not many steps along the drive, just within sight from the gate, stood, on a space of overgrown and neglected grass, a stone pedestal, like the base of a statue. In past years had some Diana with her arrows paused on the stone, a foot still lifted, but her chase suddenly stopped; or was there a lyre there, and Apollo; or had some slim figure of Silence put finger on lip in that enclosed place, wherein for long, amidst the wayward greenery, no step of man had stirred?

It was Miradou's garden — in her imagination long her very own.

At night, Orgeas thought of it — fancied it all, from the excluding gate on to the statue's pedestal, and pictured every branch of every tree. There must be Miradou walking. And at night, when the breeze stirred, the eucalyptus boughs would sway in the darkness, and the sombre cypress perhaps would have a gesture, a bend to right and to left, as the tempered wind passed over it and was gone.

And now on the eighth day it was

almost the dawn. Had Miradou left her garden as the daylight came to it? And the child was wandering — where?

An hour later, Orgeas looked out of his window. But the early morning sunlight, that was accustomed — all these recent times of the belated spring — to make upon house front and shutter its shifting pattern of cool gold, was not visible at all. Clouds that were tangible mist drifted over the mountains — seemed for a time to have a substance solid almost as the earth's; as measurable, as closely defined. Then there were heavy raindrops, and then a pelting of waters. The distance was clean gone, and suddenly the narrowed world of street and house-front was one uniform slate color.

Again, that eighth morning, Orgeas trudged to his work. By midday there was sunshine. Where was Miradou? Seeking shelter from its white flash and blinding glare in the deep shadow and coolness of some always opened church — the Cathedral perhaps, or the Oratoire, or St. Thomas in the lane — the Sœurs de St. Thomas had taught Miradou, in their school next door.

Most likely the Cathedral. Behind the altar, there, by the benches where the choristers practise, where the little organ is — the great one's deputy, in the western gallery. Yes; the Cathedral. She had her favorite picture there; she looked at it at vespers; at benediction it spoke to her. Not Fragonard's famous "Feet Washing," which a chandelier obscured; but Subleyras's "Assumption," with its touch of modernness and of the actual world — its observant crowd of Apostles who were *gens du monde* somehow; its Virgin, a very pleasant, well-bred Frenchwoman you might meet in Grasse to-day, though dressed a little differently. That was so homely. Painted so, you could understand it, quite.

Or now — thought Orgeas, absent-minded, at his work — and silent, with no smile for any comrade, for the ninth day was drawing near, and his anxiety increased — now that it was afternoon,

and the shadows were long and the ways cooler on the road to Auribeau, the downward road to the plain — now that it was that hour, was Miradou there, stepping past the rose gardens, past the orchards starred with the white of cherry blossom or flushed with *rose-du-Barry* bloom of some early peach-tree — a splash of color thrown wantonly amidst the green and the grey — past the lowland meadows from amidst whose ampler herbage the chapel of Our Lady of Valcluse lifts itself, screened by trees? Did Miradou stop? Scarcely. Only twice in the year would anybody dream of entering the deserted chapel, pilgrim-crowded on its particular fête-day. She had come on to Auribeau, the massed village, perched on the pointed hill — gone on along the rising road past the cork-trees that overlooked the bend of the river; the Siagne, limpid, green as a lake lying deep in the ravine of the shadowed hills. There! was Miradou there? But when would she return again, and the little house welcome her, and the heart that was hers so wholly leap again for joy?

She was on no far-away journey. Distant Auribeau, more distant Gourdon — they had not seen her to-day. She was nearing home now. Very close. She was waiting — was biding her time.

He knew it — Orgeas knew it. She was in their town to-night. On the Cours, by the terrace, or in the patch of city garden, by Fragonard's bust, or higher up, by the Provençal poet's — by Bellaud de la Bellaudière's. The lovers on the seat there, by the trees, in the darkness — as she passed, were they conscious of the ghost of her form? At least they were happier. She carried happiness as a garment. They were more joyful, or were more at rest — those lovers — never guessing the cause. For Miradou was there. She had passed, had turned, had paused. Very near was Miradou. Now perhaps under his own dark house-front, under the home of Orgeas; her step unrecognized only because it was silent; but surely there,

amidst the clattering steps of the living.

The next was the ninth day.

After a night in which he had slept but little, Orgeas had risen early, and, having hurried his clothes on, had thrown wide the shutters, and into the dark chambers there streamed the morning. The day before, he had given out, at the printing press, that that day they were not to expect him; he could not work that day, for that day she would come. Would it be possible, he had asked himself, before deciding it so, to fulfil his tasks as usual at each accustomed hour, and then, at nightfall only, to walk home, and a minute to settle it — there or not there; come back and tired of wandering, or back no more forever, and dead indeed? That crisis was unendurable — to stake all in a minute, as it were, upon the hazard of the die; the division between hope and fear, narrowed, refined, to a pin's point. It was not in humanity to bear it thus, with such a suddenness of knowledge. He would walk himself — and walk until he was done for. In the morning he would walk; in the afternoon, would wait.

So Orgeas made his way, that ninth morning, along the very road whose every turn, when thinking of Miradou, he had most completely realized. It was the road to Maganosc, the road past her garden. He tramped along by the two forges, by the great coach-house, the hotel, and the baronne's villa, and the English church, and the Octroi, and the turning to Malbosc. He was well on the road to Maganosc now; soon, the turn inwards, the railing and the wrought-iron gate and Miradou's garden; the eucalyptus no breeze stirred, in the sudden radiant summer; the stiffened cactus, silvery grey; the magnolia; the cypress black; and, as he peered upwards, far above it, trees climbing the hillside, till at last, amongst limestone crags, only the pines held their own. The summer was come, to welcome Miradou back; the overflowing ardors of the sun announced to Orgeas the new season; and in the stainless daylight and

the subtle air his hope was made a confidence. He walked, he almost sprang, up a steep olive-ground, and reached from it—and paced an hour—a level mule path, the country's ancient way. And from the mule path, through a mist of olive leaves, there was the warm and golden plain, and deep blue shadows of the Esterel, and leagues of distant water gleaming silvery in the fortunate day.

Coming down again, he talked to a peasant, and picked some flowers for Miradou, under the shade of the olives.

It was time to go homewards, now—fully time. One o'clock struck from Maganosc tower. It would be the beginning of the afternoon when he should arrive and be ready for her—his feet hurrying up the staircase, to her rooms in the narrow street; to Miradou's home.

She was not there yet, however. He found that when he got there. Of course not yet. But a little later. Orgeas sat in expectation. There was much to think about; so much there would be to say to her. The time would pass, not very slowly. And she would soon come.

"*Bien sûr*," he said to himself, with the phrase of days ago—the phrase with which the lonely man had comforted the earliest hours of his threatened loss—" *Bien sûr, elle reviendra ! . . . O ! pour sûr !* "

He sat brooding, waiting. She must come before the sunset of that ninth, decisive day. Yes, it would have to be before the sunset. Sunset fixed it. That he knew.

But the sun was high yet—was it not? It was well above the circle of the hills. He looked out of the window, and in the street he noticed where a certain shadow fell. He came back, and sat down. He rose again, and wandered in and out of Miradou's room that was just as she left it; and sat again; and wandered. And then he went to his window, and out of it he leaned, and looked again for the shadow. How much longer the shadow! Yet, of course, there was time.

Orgeas was seated a while, once more, in his own chair, in his particular corner. Facing it was Miradou's chair, and by Miradou's chair, her footstool. On the table stood the flowers he had brought for her. On the mantelpiece there was left, still—why of course there was left, still—a bit of her work. From her chair she had but to lift her hand and could take her work. That very night she would take her work. She was coming, now, to take it.

Surely it was not so light now, in the room, as it had been. No; it was not so light. Orgeas knew that. The light seemed creeping away.

The silvery sound of a church bell, musical, soothing, struck him next. But it was vespers. Was it, though, quite so late? Yes, it was vespers—vespers at the Cathedral. Well? Miradou must be there. She would be coming now. Certainly now. She was on the stairs, now.

Pale and the ghost of himself, for all his sustained trusting, Orgeas waited for her who was wandering ghost no more. A woman again; his child; his hand could press her. Her head was against his head. He held her wrist; feeling the throb of her pulses. The long, the long suspense was all but over. Miradou would be here.

It was getting darker now. It was much, much darker. Was there any color in the flowers? And Miradou's print gown, that hung on a peg by the window—it was the child's red gown, remember—What was the color of Miradou's red gown? Had the curtain any color?

FREDERICK WEDMORE.

From Chambers' Journal.
CORDITE AND ITS MANUFACTURE.

OF all the legion of explosive bodies which have been discovered during the present century, there is only one that can in any measure be considered a rival to gunpowder for use in guns, and that one is cordite, our British smoke-

less powder. The remainder are either too sensitive to allow of safe transport, or are too local in their action; and are entirely unfit to take the place occupied so long by the oldest of all explosives — gunpowder. Assuming, then, that for naval and military purposes a supply of either cordite or gunpowder is indispensable, the question arises — and it is one of considerable importance — Supposing our ports were blockaded for any lengthened period, and our supplies thus cut off, should we be able to maintain the necessary stock of explosives?

At present, we are entirely dependent upon foreign materials for the manufacture of these bodies. Of the ingredients used in making gunpowder — namely, charcoal, sulphur, and nitre (potassium nitrate), the first-named is the only one obtained in this country, both the sulphur and nitre being imported. Similarly in the case of cordite, which is a mixture of gun-cotton, nitro-glycerine, and vaseline, we again rely upon foreign sources for the necessary materials. Thus the nitric acid used in making the nitro-glycerine and gun-cotton is all manufactured from sodium nitrate imported from Chili and Peru; the vaseline is obtained from the United States. It is well worth considering, then, what we should do if thrown by invasion upon our own resources, in order that the requisite substances might be produced in sufficient quantity.

On examining in detail the materials required to manufacture these explosives, it will be found that the chief difficulty would be to obtain a supply of the nitrogen compounds used — nitre in the case of gunpowder, and nitric acid in that of cordite. Taking gunpowder: the charcoal would always be forthcoming; sulphur — of which there are vast quantities locked up in our minerals — could be procured in abundance by resorting to chemical processes. Indeed, at the present time sulphur is one of the most important by-products at all alkali works where the Leblanc method is practised. Great attention has been bestowed upon the

recovery of the sulphur from the alkali wastes, with the result that ninety-eight per cent. of the element present in the waste may now be recovered by modern processes. Scarcity of sulphur, therefore, need not be apprehended. But our production of nitre is absolutely nil; and it is to this constituent of gunpowder that attention would have to be devoted.

Coming to cordite, and taking its constituents separately: the gun-cotton is made from cotton waste by the action of nitric acid in the presence of concentrated sulphuric acid. In case of extremity, cotton rags of any description, or even fibres of wood, could be used instead of the cotton waste. The sulphuric acid is made from our own natural productions. The nitric acid — made from foreign sodium nitrate — would be the ingredient for the production of which efforts would have to be directed. So with nitro-glycerine, which is made by acting upon glycerine with nitric acid and strong sulphuric acid. Our soap-works could supply an abundance of glycerine; but we should again be faced with the necessity of making the nitric acid. The third body used in making cordite — namely, vaseline — could be replaced if necessary by some of the heavy oils obtained by distilling coal-tar or shale. So that in the case of our smokeless powder, as in that of gunpowder, the difficulty would be found in obtaining the nitrogen compound.

Even if some of the more feasible of the other explosives known could be pressed into service for use in our ordnance, the same contingency would still confront us, as nitric acid is essential to the manufacture of almost all of these. Thus, picric acid — variously known as melinite, lyddite, etc. — is made by acting upon phenol with nitric acid; nitro-benzene by treating benzene with nitric acid; and so on.

These two nitrogen compounds — nitre and nitric acid — without which none of our explosives could be made, are easily convertible one into the other. Given either, the second could be readily produced; and if any means

were known by which one of them could be obtained, the question would be solved. It would be interesting, therefore, to consider the possible ways by which this end could be secured.

In spite of the advances made in chemical science, we are as yet acquainted with only one process by which nitre may be made directly in useful quantities. It was adopted by the French during the Revolution, when their coasts were blockaded, and their supply of nitre for making powder ran short. No improvement or development has yet been made upon the simple though tedious method then used, which is as follows: Heaps of manure were allowed to rot in the dark for some months, after which the ashes of plants were scattered over the fermented heap, which was moistened occasionally with stable runnings. The white crust which appeared on the mass after a time—consisting chiefly of nitrates of calcium and magnesium—was removed, and boiled with potash lyes, upon which it decomposed, yielding an impure nitre, which was purified by recrystallizing. Recently, Pasteur and Warington have investigated the formation of nitrates in manure-heaps, and have found that the nitrogen contained in the organic matter is converted into nitric acid by small organisms. When plant-ashes are placed on the mass, this nitric acid combines with the lime and magnesia present in the ashes, forming their respective nitrates.

Having regard, however, to the slowness of the method and the greater expenditure of explosives in modern warfare, it is doubtful whether sufficient material could be thus provided; and we should in all probability have to bring in the aid of other processes to serve as auxiliaries to the foregoing. Of these, notwithstanding the fact that the elements contained in nitric acid are present in limitless quantities in air and water, only two have been discovered, and each of these would require considerable development before

any appreciable and useful quantity of the necessary nitrogen compounds could be produced by their means. The first of these depends on the fact, that when a hydrogen flame is burnt in a mixture of oxygen and air, some nitric acid is formed during the combustion. If this were performed on a large scale, there is little doubt that considerable quantities of nitric acid could be obtained, and from it the nitre could be made. But at the best, this process is cumbersome and expensive, and the quantity of nitric acid produced is very small in proportion to the amount of hydrogen consumed. It would certainly be the last method resorted to, unless it could be vastly improved. Recently, however, an interesting means of producing nitric acid has been discovered by Crookes. It is undoubtedly capable of great extension, and if properly worked out, would in all probability supersede the present methods for making this acid. Crookes found that when a powerful, rapidly alternating current of electricity was passed through a Tesla induction coil, the poles of which were placed beyond sparking distance, the air between the poles could be lighted like ordinary coal-gas, clouds of nitric acid vapor being produced by the burning. This discovery is of the greatest importance; and if the process were extended so as to work on a very large scale, there is no reason why a large supply of nitric acid could not be readily and cheaply obtained in this manner.

Such, then, are the methods, at present imperfect, upon which we should be compelled to rely in the event of a sustained invasion of our islands. It is to be hoped that in the near future either they will be made more expeditious, or some better means of producing the requisite nitrogen compounds will be devised, and so furnish these ingredients in such quantity that no drawback could possibly be experienced through lack of explosive materials under any circumstances.

